Department of Veterans Affairs
Decentralized Hospital Computer Program

RADIOLOGY/NUCLEAR MEDICINE TECHNICAL MANUAL

Version 4.5

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Preface

This manual is intended to be used as a technical reference guide for IRM personnel. It lists and describes the various technical components (e.g., routines) that make up the Radiology/Nuclear Medicine package.

Table of Contents

Introduction

The Radiology/Nuclear Medicine package is a comprehensive software package designed to assist with the functions related to processing patients for imaging examinations. The package automates a range of Radiology/Nuclear Medicine functions, including order entry of requests for exams by clinical staff, registration of patients for exams, processing of exams, recording reports/results, verification of reports on-line, displaying/printing results for clinical staff, automatic tracking of requests/exams/reports, and generation of management statistics/reports, both recurring and ad hoc. The package automates many tedious tasks providing faster, more efficient and accurate data entry and more timely results reporting. The Radiology/Nuclear Medicine package uses the prefix RA.

The package interfaces with the Record Tracking package for the purpose of tracking Radiology/Nuclear Medicine records and creating pull lists for those records needed for scheduled clinic appointments. It interfaces with the Health Level Seven package for the exchange of exam and report information. It interfaces with the Health Summary package to allow users to see patient medication histories and laboratory test results which may influence the nature of the examination. It interfaces with the Order Entry/Results Reporting package to allow requesting of exams and viewing of reports. It interfaces with the Adverse Reaction Tracking (ART) package (formerly Gen. Med. Rec.-Allergies) for the exchange of data concerning a patient's allergies. Also, it interfaces with the AMIE package to display exam results.

Globals:

RA **Description: This global contains all of the general table type files used by the Radiology/Nuclear Medicine package. These files are pointed to by other files and contain various types of parameters that may be set up at each site to customize the package to meet that site's needs. The files contained in this global are:**

Examination Status (#72)
Standard Reports (#74.1)
Rad/Nuc Med Reason (#75.2)
Complication Types (#78.1)
Flash Card Formats (#78.2)
Diagnostic Codes (#78.3)
Film Sizes (#78.4)
Camera/Equip/Rm (#78.6)
Label Print Fields (#78.7)
Rad/Nuc Med Division (#79)
Imaging Locations (#79.1)
Imaging Type (#79.2)

It should be journalled and translated if the operating system supports these functions.

Journalling: Mandatory

RADPT **Description: This global only contains data for the Rad/Nuc Med Patient file (#70).**

It should be journalled and translated if the operating system supports these functions.

Journalling: Mandatory

RAMIS **Description: This global contains all the files related to Rad/Nuc Med AMIS reporting. The files contained in this global are:**

Rad/Nuc Med Procedures (#71)
Major Rad/Nuc Med AMIS Codes (#71.1)
Procedure Modifiers (#71.2)
Rad/Nuc Med Common Procedure (#71.3)
Rad/Nuc Med Procedure Message (#71.4)
Imaging Stop Codes (#71.5)

It should be journalled and translated if the operating system supports these functions.

Journalling: Mandatory

RABTCH **Description: This global contains data for:**

Report Batches (#74.2)
Report Distribution Queue (#74.3)
Report Distribution (#74.4)

It should be journalled and translated if the operating system supports these functions.

Journalling: Mandatory

RAO **Description: This global contains the data for Rad/Nuc Med Orders file (#75.1).**

It should be journalled and translated if the operating system supports these functions.

Journalling: Mandatory

RARPT **Description: This global contains only data for Rad/Nuc Med Reports file (#74).**

It should be journalled and translated if the operating system supports these functions.

Journalling: Mandatory

Key Variables:

RACCESS This local array identifies the user's division, imaging type and imaging location access. This variable, along with RAIMGTY, RAMLC, RAMDV, and RAMDIV are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.

For any initial menu for the Radiology/Nuclear Medicine package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The array elements that identify the user's division access look like the following:

RACCESS(DUZ,"DIV",File #79 IEN,File #79.1 IEN)=File #4 IEN^Division name

The array elements that identify the user's imaging type access look like the following:

RACCESS(DUZ,"IMG",File #79.2 IEN,File #79.1 IEN) =null^Imaging Type name

The array elements that identify the user's location access look like the following:

RACCESS(DUZ,"LOC",File #79.1 IEN)=File #44 IEN^Hospital Location name

RABED Bedsection name. First piece of the zeroth-node for an entry in File #42.4 [Specialty - ^DIC(42.4,].

RABTCH Internal entry number to File #74.2 [Report Batches - ^RABTCH( ] that is used during various batch processing functions.

RACLNC Default clinic name used in the initial exam entry process. First piece of the zeroth-node of an entry in File #44 [Hospital Location - ^SC( ].

RACN Case Number for an exam; ^RADPT(RADFN,"DT",RADTI,"P",RACNI,0)=RACN^...

RACNI Internal entry number for an exam; ^RADPT(RADFN,"DT",RADTI,"P",RACNI,0)

RACRT This variable is used by the various workload report routines and it contains either a 'y' for 'yes' or an 'n' for 'no' to indicate to the routine whether the exam being processed should be used in the compilation of the report.

The value of RACRT is obtained from the Examination Status file (#72) entry for which the exam being processed points to. In the Examination Status file there is a field for each workload report.

The variable name RACRT comes from 'CRiTeria'.

RACS RACS="Y" if the clinic stop has already been recorded for the exam currently being processed. This variable is only set when needed to determine whether to call SDACS to hand MAS the stop code and CPT information for the exam.

RACT Internal set value for the various activity logs through out the system; for example, in the exam activity log 'E' means 'Exam Entry'

RADATE Date of registered exam expanded to a user readable format. (i.e., Jun 17,1984)

RADFN Internal entry number to Files #2 and #70 [Patient - ^DPT( ]; [Rad/Nuc Med Patient - ^RADPT( ].

RADIV Used in the various workload reports, such as RAWKL*, RAPRC*, RALWKL*, RAMIS*, RAFLM*, to indicate the division currently being processed.

RADOB Patient's date of birth. Third piece of the zeroth node of an entry in File #2 [Patient - ^DPT( ].

RADTE Exam registration date/time; ^RADPT(RADFN,"DT",RADTI,0)=RADTE^....

RADTI Internal entry number of exam registration date/time; also the inverse exam registration date/time; ^RADPT(RADFN,"DT",RADTI,0)

RADUZ Most of the time this is the same as DUZ variable. However, the Radiology/Nuclear Medicine package has the 'feature' to require the user to input their access code during certain processes. RADUZ is equal to that access code's DUZ number.

RAEXFM Internal entry number to File #78.2 [Flash Card/Label Format - ^RA(78.2,] that is used for the 'exam' label.

RAEXLBLS Number of exam labels to be produced by RAFLH* routines.

RAF5 RAF5=IEN of the ward for the patient if the exam being processed was done while the patient was an Inpatient. RAF5's value is taken from the Ward field of the exam subfile of the Rad/Nuc Med Patient file.

RAFIN This variable is a flag that is set inside the RA REGISTER input template. If defined after the template is exited, then the system knows that the registration process went to normal completion.

If it is not defined, then the system will automatically delete that current exam because not all questions were answered during the registration process.

RAFLH This variable can take on two different meanings depending on the routine that is being executed.

When you first log on to the package, the routine RAPSET is executed. This routine computes various parameters for the current logon session. One of the parameters set is the printer where all the flash cards requested by the user are printed. The variable RAFLH is used to store this printer information temporarily until it is set in the third piece of the variable RAMLC. (See RAMLC description for more information.)

The variable RAFLH, throughout the rest of the system, is used to specify which Flash Card Formats file (#78.2) entry to use when printing a flash card.

RAFMT Internal entry number to File #78.2 [Flash Card Formats - ^RA(78.2] used to produce one of the following:

1) flash card (RAFLH)
2) exam label (RAEXFM)
3) film jacket label (RAJAC)
4) report header (RAHDFM)
5) report footer (RAFTFM)

Before each of the above is produced, their respective routine sets RAFMT to their associated format entry and then PRT^RAFLH is called.

RAFTFM Internal entry number to File #78.2 [Flash Card Formats - ^RA(78.2,] that is used for the report footer.

RAGE Patient's age.

RAHDFM — **Internal entry number to File #78.2 [Flash Card Formats - ^RA(78.2,] that is used for the report header.**

RAHEAD — **This is the header used when executing the utility routine RAPTLU. This routine displays the current exams on file for a patient. Depending on what the user is currently doing, the header is different.**

RAIMGTY — **This variable, along with RACCESS, RAMLC, RAMDV, and RAMDIV are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.**

For any initial menu for the package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

This variable tracks the Imaging Type for each user based on the location determined at sign-on.

RAJAC — **Default jacket label printer information. (Used only in RAPSET*, the parameter setting routine executed upon logging into the program.)**

RAKEY — **During various processes in the Radiology/Nuclear Medicine system, the user must have a certain key. By setting RAKEY equal to this key and then calling USER^RAUTL the system uses one common set of code to check and verify if the user is qualified to do the current process and asks for an access code if required.**

RAMDIV — **This variable, along with RACCESS, RAMLC, RAMDV, and RAIMGTY are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.**

For any initial menu for the package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The variable RAMDIV is the internal entry number to File #79 [Rad/Nuc Med Division - ^RA(79,]. This is the division that the current location is associated with.

NOTE: An imaging location can only be associated with one division.

RAMDV **This variable, along with RACCESS, RAMLC, RAMDIV, and RAIMGTY are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.**

For any initial menu for the package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The variable RAMDV has 24 pieces that are currently in use. Each piece contains parameter information pertaining to the current 'division' the user is signed on under. All values are '1' for 'yes' or '0' for 'no'.

The following is a description of each piece:

Piece	Description
1	[not used]
2	should a flash card be printed for each exam.
3	[no longer used]
4	[no longer used]
5	[no longer used].
6	various activity logs are kept during the processing of exams and their reports. This piece indicates whether the user should be asked for their access code during each process or should the system automatically use the user code associated with the initial logon. If 'yes' then system assumes the logon user code (DUZ).
7	should entry of a 'Detailed' or 'Series' procedure be required during initial exam registration. If '0' then user can enter a 'Broad' code. However, before the exam can be placed in a 'Complete' status the procedure must be changed to a 'Detailed' or 'Series' procedure.

8 should a jacket label be printed automatically during each visit.

9 should 'camera/equipment/room' be asked during exam editing.

10 should the system automatically collect the time when the exam status changes.

11 If piece 10 is set to '1', collect status change time data, then should the user be asked the time of the status change or should the system automatically use the current date and time. (If you are batch filing the changes then this parameter would be '1' so that the user can put in the actual change time.)

12 should the transcriptionist be given the opportunity to select a standard report during initial report entry.

13 should the transcriptionist be given the opportunity to place reports in a batch during report entry.

14 should the transcriptionist be given the opportunity to copy the contents of one report into another.

15 allow reports to have the status 'Released/Unverified' which will permit the displaying of the report even though it is not verified.

16 require that an impression be given on a report before the report can be verified and the exam to be considered 'complete'.

17 should the transcriptionist be prompted for the date the exam was requested.

18 allow interpreting residents to verify other interpreting physicians' reports while using the On-line Verifying of Reports option.

19 collect the date and the time of request status changes.

20	[not used]
21	indicate that the user should be asked when requesting an exam, which Imaging Location the request should be forwarded to.
22	if a user without the RA MGR key can enter a report on a cancelled case.
23	[not used]
24	the number of hours in the future (0-168) that a user may register a patient for an exam.
25	should the report status appear on unverified reports.

NOTE: These parameters are permanently stored in the .1 node of the appropriate entry in File #79 [Rad/Nuc Med Division - ^RA(79,]. The Division Parameter Set-up option under the System Definition Menu is used to set this node.

RAMLC **This variable, along with RACCESS, RAMDIV, RAMDV, and RAIMGTY are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.**

For any initial menu for the Radiology/Nuclear Medicine package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The variable RAMLC has thirteen pieces. Each piece contains parameter information pertaining to the current imaging location the user is signed on under.

The following is a description of each piece: (IEN ==> internal entry number)

Piece	Description
1	IEN to File #79.1 [Imaging Location] - used to stuff proper location in registration record.
2	how many flash cards to produce per patient visit.

3 flash card printer name - used to automatically queue flash cards and exam labels without having to ask the user the device question.

4 how many jacket labels to print per visit.

5 jacket label printer name - used to automatically queue jacket labels without having to ask the user the device question.

6 IEN to File #79.2 [Imaging Type] - used to stuff proper imaging type in registration record (always Rad/Nuc Med's internal number).

7 default flash card format
- IEN to File #78.2 [Flash Card Formats]
- used when queuing a flash card to print; this format is the default flash card for the current location.

8 how many exam labels to produce for each exam - when flash cards are queued to print the system must also be told how many exam labels to print.

9 default exam label format
- IEN to File #78.2 [Flash Card Formats]
- used when queuing an exam label to print; this format is the default 'exam label' for the current location.
- Note: exam labels always print after flash card labels are printed.

10 report printer name - used to automatically queue reports without having to ask the user the device question.

11 default jacket label format
- IEN to File #78.2 [Flash Card Formats]
- used when queuing a jacket label to print; this format is the default jacket label for the current location.

12 default report header format
- IEN to File #78.2 [Flash Card Formats]

- used when queuing a report to print; this format is the default 'header' for the current location.

13 default report footer format
- IEN to File #78.2 [Flash Card Formats]
- used when queuing a report to print; this format is the default footer for the current location.

NOTE: These parameters are permanently stored in the zeroth node of the appropriate entry in File #79.1 [Imaging Location - ^RA(79.1,]

The Location Parameter Set-up option under the System Definition Menu is used to set this node.

RAMUL Internal entry number to File #71.2 [Procedure Modifiers - ^RAMIS(71.2,]

RANME Patient's name. First piece of the zeroth-node of File #2 [Patient - ^DPT( ].

RANUM Number of flash cards, exam labels or jacket labels to produce when there is a call to PRT^RAFLH. RANUM is always one for report header and footer production.

RAPHY Default provider name used in the initial exam entry process. First piece of the zeroth-node of an entry in File #200 [New Person - ^VA(200,]

RAPRC Exam Procedure name. First piece of the zeroth-node of an entry in File #71 [Rad/Nuc Med Procedures - ^RAMIS(71,].

RAPRI Internal entry number to File #71 [Rad/Nuc Med Procedures - ^RAMIS(71,].

RAQUICK This variable is used inside the 'Edit Exam' template to properly log an entry into the exam's activity log. The variable is set before going into the template. If set to '1' then the template knows that the editing is occurring through the case number edit routine and if set to '0' then it means the editing is occurring from the edit by patient routine.

RARPT Internal entry number to File #74 [Rad/Nuc Med Reports - ^RARPT( ].

RASER Service name. First piece of the zeroth-node of an entry in File #49 [Service/Section - ^DIC(49,].

RASSN	**Patient's SSN. Ninth piece of the zeroth-node of an entry in File #2 (Patient - ^DPT( )**
RAST	**This variable can have three meanings depending on where it is used.** **In routine RADEM1, the patient demographic display routine, it is equal to the first piece of the zeroth node of an entry in File #72 [Examination Status - ^RA(72,].** **In routine RARTR, the report print routine, it is equal to the set code for the report status.** **Otherwise, this variable is normally equal to the internal entry number of an entry in File #72 [Examination Status - ^RA(72,]**
RASTI	**Internal entry number to File #72 [Examination Status - ^RA(72,].**
RAWARD	**Ward Name. First piece of the zeroth-node of an entry in File #42 [Ward Location - ^DIC(42,].**

Function:

RACAT	**Uses Category of Exam to compute the patient location or contract/sharing agreement.**

Bulletins:

Six bulletins are exported with this package, two of which are new.

Bulletin Name	**Description**
RAD/NUC MED CREDIT STOP ERROR (new)	**Notifies a mail group that a Clinic Stop code has not been credited for a particular exam.**
RAD/NUC MED EXAM DELETED	**Notifies a mail group that an exam was deleted.**
RAD/NUC MED REPORT DELETION	**Notifies a mail group that a report was deleted.**
RAD/NUC MED REPORT UNVERIFIED	**Notifies a mail group that a report was unverified (i.e., no longer has a status of "V"erified).**

RAD/NUC MED REQUEST CANCELLED	**Notifies a mail group that a request was cancelled.**
RAD/NUC MED REQUEST HELD (new)	**Notifies a mail group that a request is in a Hold status.**

Mail Groups:

Your facility probably has a mail group associated with each of the four bulletins exported before this version. You should associate a new or existing mail group with the two new bulletins, as well as the four existing ones, so users can receive these Radiology/Nuclear Medicine messages. These bulletins are generated when an important action has taken place, such as the deletion of a report. Consult with the package ADPAC to determine how many mail groups to create, what mail group(s) to associate with each bulletin, and who should be the mail group coordinator. See Appendix B of the Radiology/Nuclear Medicine Installation Guide for suggestions and examples on creating mail groups and associating those mail groups with Radiology/Nuclear Medicine bulletins.

Other:

There are no Forms, Help Frames or Window Objects exported with this version.

Implementation and Maintenance

Overview:

After installation of the software:

1. **At least one division for your site must be defined (File #79).**

2. **Give the ADPAC access to at least one Imaging Location (field 74) in the New Person file (#200). Without this no one will be able to sign onto the system. Once the ADPAC has access, s/he must give each package user (technologist, interpreting resident physician, interpreting staff physician, or clerk) location access so they can sign on. The ADPAC can give users access with the Classification Enter/Edit option. Without an assigned imaging location, a user simply cannot access the package.**

Other than the IRM menu, the ADPAC manual contains three menus of options that help with implementation and maintenance.

There are two main messages that users may receive that concern IRM:

1. Radiology/Nuclear Medicine Division definition error. Call your site manager.

When a user calls about this message, it means there is insufficient information in the imaging location that was selected by the user. Make sure the ADPAC has given that location to a division in the Division Parameter Set-up option Rad/Nuc Med Division file (#79), field #50.

2. No default "ABC" printer has been assigned. Contact IRM.

This message appears when the ADPAC is editing the printers in the Location Parameter Set-up option and as yet a printer has not been assigned for that activity (jacket labels, flash cards, or exam labels). Use the option Device Specifications for Imaging Locations to assign them.

The remainder of this section describes the options on the IRM Menu and makes suggestions concerning the Health Level Seven package interface.

IRM Menu [RA SITEMANAGER]...
Option: Device Specifications for Imaging Locations [RA DEVICE]

The Device Specifications for Imaging Locations option allows the computer site manager to specify the device parameters, default printers and input devices for each location at a site. Once parameters are entered for default printers (flash card, jacket label, request and reports) and the printer names have been assigned to the location, output will automatically be routed to these devices.

If a default printer is not entered, the user will be prompted to select a printer at the time they initially access the Radiology/Nuclear Medicine package. If a default printer is not selected at the time of initial access to the package, the user will be prompted for a printer each time they elect to print a flash card, jacket label, request, or report.

Note: When an exam is requested via the Request an Exam option, the prompt, "Submit Request To:" is screened. Therefore, if a Request Printer is malfunctioning, it will have to be changed for that location until the printer is fixed. This is an option that you may wish to assign to the package ADPAC.

The following describes a nearly obsolete feature of the Radiology/Nuclear Medicine package that was useful on PDPs but may be eliminated in a future version.

> **Each time a user attempts to access the Radiology/Nuclear Medicine package, the system will attempt to identify the division/location associated with the device to which the user is currently signed on. The entry of Input Device(s) will determine which input devices are to be associated with which divisions/locations so that during an entire session the system will automatically use the parameters associated with that division/location. An input device may only be defined to one location.**
>
> **If a valid input device name is entered, you will then be asked whether the user should be asked, during various editing functions, to enter their access code. You may wish to answer Yes to this prompt if the input device is a terminal utilized by multiple users. If you set this parameter to No, then the initial access code entered at sign-on will be used until the session is terminated. This will usually be done at PDP sites only. Other sites normally would not define input devices.**
>
> **If you log on to a defined input device, you will not be prompted for a location upon sign on. If an input device has not been defined, you will be prompted with a default location based on your entry at last sign on.**

The first question you are asked when accessing this option concerns device specification help. If you respond Yes to this prompt, you receive the following message:

```
Input Devices Associated with a Location:
-------------------------------------------------
When a user signs on the system and tries to access the module the first
action by the module will be to determine which rad/nuc med division and
location the user is associated with.

The module uses the device name to do this. If the current device name is the
same as one of the names you are about to associate with a particular division
and location, then during the entire session the system will automatically use
the parameters that the coordinator has specified for that division and
location.

For example, the user will never be asked how many flash cards to print or
what flash card format to use. The parameters have that information.

Default Printer Assignments:
----------------------------
There are three location parameters that the coordinator will not be
able to enter. They are the default printers. Specifically, the default flash
card, jacket label and report printers. Once you have assigned these printer
names to the location, the module will automatically route output to the
appropriate printer without having to ask the user.


Naming Devices in the Device File [file #3.5 - ^%ZIS(1, ]
---------------------------------------------------------
THE FOLLOWING IS INFORMATION IS OBSOLETE AND WILL BE REMOVED IN THE NEXT
VERSION: If you have all radiology devices on one CPU there really is no
problem in what you name your radiology devices in the device file.

However, if you plan to have radiology locations access the module from more
than one computer, it is important to have all radiology devices defined in
each computer's device file.

For example, assume the computer you are using right now is CPU 'AAA' and you
plan to put most of the locations on 'AAA' but the remainder will go
on CPU 'BBB'.

More specifically, device 72 on 'AAA' will be assigned to location '2ND FLOOR'
and device 84 on 'BBB' will be assigned to location 'OP CLINIC'.
```

The following entries in each CPU's device file must be made before you can make those assignments:

```
CPU AAA                                 CPU BBB
-------                                 -------
NAME: 72A                               NAME: 72A
LOCATION OF TERMINAL: 2ND FLOOR         LOCATION OF TERMINAL: 2ND FLOOR
    .                                       .
    .                                       .
    .                                       .
OTHER COMPUTER:                         OTHER COMPUTER: AAA

NAME: 84B                               NAME: 84B
LOCATION OF TERMINAL: OP CLINIC         LOCATION OF TERMINAL: OP CLINIC
    .                                       .
    .                                       .
    .                                       .
OTHER COMPUTER: BBB                     OTHER COMPUTER:
```

Now you can make those assignments and the radiology module will know which division and location parameters to use.

Printer devices should be entered in a similar fashion before you assign defaults to each location.

If the above entries are not made then the user will be asked their location. Also, when producing any flash cards, jacket labels or reports, the user will be asked which printer to use.

REMEMBER, the above entries into the device file (3.5) only apply if you plan to have radiology locations on more than one computer.

The following is an example of adding specifications for a new location.

Prompt/User Entry:

```
Do you wish to read the device specification
'help' message? No// <RET>

Select Location: ??

CHOOSE FROM:
   X-RAY     GENERAL RADIOLOGY
   NUC MED LOC     NUCLEAR MEDICINE
   MAGNETIC RESONANCE IMAGING
                   MAGNETIC RESONANCE IMAGING
   FLUORO     GENERAL RADIOLOGY

  This field points to the Hospital Location
  File, and contains the name of this location.

CHOOSE FROM:
   FLUORO
   MAGNETIC RESONANCE IMAGING
   NUC MED LOC
   ULTRASOUND
   X-RAY

  Name given by user to any ward, clinic,
  fileroom, operating room or other location
  within a VA facility.
Select Location: ULTRASOUND
```

Directions:

Select the appropriate location. The entry selected must be set up as IMAGING in the Type field (#2) of the Hospital Location file (#44).

At every device prompt in this option, one or two question marks (? or ??) will give you a list of selectable devices and their locations.

```
Default Printers:
-----------------
FLASH CARD PRINTER NAME: FC PTR

JACKET LABEL PRINTER NAME: JL PTR
REQUEST PRINTER NAME: REQUEST PTR
REPORT PRINTER NAME: REPORT PTR


Input Devices at this Location:
-------------------------------
Select INPUT DEVICES: <RET>
```

Enter the full name of the device.

NOTE: These device fields are not pointing to File #3.5!

This field will rarely be needed.

IRM Menu [RA SITEMANAGER]...
Option: Distribution Queue Purge [RA RPTDISTPURGE]

The Distribution Queue Purge option allows the site manager to purge the distribution files. This would be done to eliminate old reports that have already been printed or reprinted.

The information purged includes the Activity Log in the Reports Distribution Queue file (#74.3) and the actual reports in the Report Distribution file (#74.4).

The user is prompted for a purge date and a device. Any reports printed prior to that user specified date are purged from the distribution files.

```
 **** Routine to Purge Reports Distribution File ****

Purge distribution files of reports printed before: 1/1/85  (JAN 01, 1985)
      Request Queued.
```

A mail message will be sent to you with the results of the purge which includes the date/time the purge begins and ends.

```
Subj:  Distribution Queue Purge   [#12256]  09 Feb 95 11:34   4 Lines
From:  Radiology Package in 'IN' basket.      Page 1  **NEW**
---------------------------------------------------------------------------

Purge distribution files of reports printed before JAN 1,1985

Distribution files purge process begun at FEB 9,1995  11:34
Distribution files purge process completed at FEB 9,1995  11:34

Select MESSAGE Action: IGNORE(in IN basket)//
```

Note: Occasionally, a facility has kept the Distribution Queues active, but reports have not been printed for a long time causing a high volume of unprinted reports to sit in the queue. This purge option is not designed to purge unprinted reports. To delete unprinted, historical reports that you do not want to print from the queues, use the Rebuild Distribution Queues [RA RPTDISTREBUILD] option. Rebuilding also supports populating the queues with reports verified on or after a date you choose.

IRM Menu [RA SITEMANAGER]...
Option: Failsoft Parameters [RA FAILSOFT]

The Failsoft Parameters option allows IRM to specify the following parameter:

Operating conditions: This field contains the hardware conditions parameter that tells the system the type of operating conditions that are in effect. Choose from Normal and Emergency. Under normal conditions, the system will use the parameters set up in the Imaging Locations file (#79.1) to determine which input and printer devices to use. Under emergency conditions, the system ignores all the location parameters and prompts the user to enter this information during each process. This function is also referred to as failsoft.

Prompt/User Entry:

Directions:

```
Select IMAGING TYPE TYPE OF IMAGING: ?
 ANSWER WITH IMAGING TYPE TYPE OF IMAGING, OR
ABBREVIATION
CHOOSE FROM:
   ANGIO/NEURO/INTERVENTIONAL
   CARDIOLOGY STUDIES (NUC MED)
   CT SCAN
   GENERAL RADIOLOGY
   MAGNETIC RESONANCE IMAGING
   NUCLEAR MEDICINE
   ULTRASOUND
   VASCULAR LAB

Select IMAGING TYPE TYPE OF IMAGING: ULTRASOUND


The following parameter applies to all divisions:
-------------------------------------------------
```

Choose an Imaging Type from the list shown when you enter one question mark.

Prompt/User Entry: **Directions:**

```
OPERATING CONDITIONS: ?
     CHOOSE FROM:
       N        NORMAL
       E        EMERGENCY(NORMAL COMPUTER DOWN)
OPERATING CONDITIONS: ??
     This field contains the hardware
conditions parameter that tells the system
the type of operating conditions that are in
effect.  The available conditions are: 'N' for
normal and 'E' for emergency.

     Under NORMAL conditions, the system uses
the parameters set up in the 'Imaging
Locations' file to determine which input and
printer devices to use.  Under EMERGENCY
conditions, the system ignores all the
location parameters set up and the user is
prompted for this information.
     CHOOSE FROM:
       N        NORMAL
       E        EMERGENCY(NORMAL COMPUTER DOWN)
OPERATING CONDITIONS: NORMAL
```

IRM Menu [RA SITEMANAGER]...
Option: Imaging Type Activity Log [RA IMGLOG]

The Imaging Type Activity Log option enables the IRM site manager to acquire a hardcopy log of certain activities.

The log includes the following information: the date on which the activity occurred, the user who initiated the activity, the number of exams affected (if any) and the number of reports affected (if any).

The types of activities listed are:

1) **Changes in imaging type parameters**
2) **Scheduled data purge**
3) **Completion of data purge**
4) **Modification of on-line data criteria (changes made through the Purge Data Function option)**

Prompt/User Entry:	**Directions:**
`Device:`	**Enter the name of a device or strike the <RET> key to bring the output to your screen.**
	An example of the output is on the following page.

```
Imaging Type Activity Log                    MAY 16,1994  08:22    PAGE 1
DATE              ACTION                 USER             EXAMS        REPORTS
-------------------------------------------------------------------------------
        TYPE OF IMAGING: CT SCAN
APR 15,1994  14:11 CHANGE IMAGE TYPE PA   BELINSKI
```

```
Imaging Type Activity Log                    MAY 16,1994  08:22    PAGE 2
DATE              ACTION                 USER             EXAMS        REPORTS
-------------------------------------------------------------------------------
        TYPE OF IMAGING: GENERAL RADIOLOGY
AUG 18,1993  14:12 ON-LINE CRITERIA MOD   HOWAR,CIND
AUG 18,1993  14:39 SCHEDULE DATA PURGE    HOWAR,CIND
AUG 18,1993  14:39 DATA PURGE COMPLETE    HOWAR,CIND         789            430
AUG 23,1993  08:45 CHANGE IMAGE TYPE PA   HOWAR,CIND
MAR 15,1994  09:42 ON-LINE CRITERIA MOD   HOWAR,CIND
```

```
Imaging Type Activity Log                    MAY 16,1994  08:22    PAGE 3
DATE              ACTION                 USER             EXAMS        REPORTS
-------------------------------------------------------------------------------

        TYPE OF IMAGING: MAGNETIC RESONANCE IMAGING
AUG 18,1993  14:13 ON-LINE CRITERIA MOD   HOWAR,CIND
AUG 18,1993  14:39 SCHEDULE DATA PURGE    HOWAR,CIND
AUG 18,1993  14:39 DATA PURGE COMPLETE    HOWAR,CIND         230             45
```

IRM Menu [RA SITEMANAGER]...
Option: Purge Data Function [RA PURGE]

The Purge Data Function option enables the IRM site manager to purge specific data from the system without affecting the integrity of the patient records. You must enter cut off dates (or accept the default) for the following types of data which may be purged using this option:

1. **Activity logs**
2. **Status tracking times**
3. **Reports (not the impressions)**
4. **Clinical histories**
5. **Order data (procedure requests)**

At each prompt concerning one of the above data types, you will be setting the imaging type parameter for the number of days to keep the various activity logs on-line. The number of days for each is determined by the coordinator and the IRM site manager.

The number of days must be a whole number between 90 and 9999 for Activity Log, Report, Clinical History, Tracking Time. The default number of days for the Order Data Cut-Off is 90, therefore, your entry must be a whole number between 30 and 9999. The orders which will be purged include those whose last activity date is greater than the number of default days and whose order status is Discontinued, Hold, Complete or Pending. The report impressions will remain on-line even after purging.

This operation should be run during off-hours. A system back up should be completed prior to execution of the purge routine.

The output will include the date/time the purge routine starts and is completed and all purge statistics compiled for records processed, reports processed and requests processed. Entries are made to the imaging type activity log showing any changes to on-line criteria, purge routine scheduling and a record of completion.

Upon completion of the purge process, a global efficiency should be run on the globals RADPT and RARPT. Following purges, IRM should assess disk space availability and global efficiency to decide whether a compaction of the RADPT and RARPT globals are necessary. On large systems, typically 2 to 4 megabytes of storage space can be regained, within a three month period, if these globals are saved out to a host file, killed, then reloaded back to the MUMPS UCI. It is a site management decision as to when these globals should be saved out to host files.

By purging information that is unnecessary for the maintenance of the system and associated patient records, you will extend your disk space and possibly speed up processing time.

The following is an example:

Prompt/User Entry:	**Directions:**
Do you want to edit the Imaging Type purge parameters? Yes// **<RET>**	**Enter "Y" or <RET> to edit the Imaging Type parameters. Entering "N" will exit you back to the menu.**
Select IMAGING TYPE: **?** ANSWER WITH IMAGING TYPE TYPE OF IMAGING, OR ABBREVIATION CHOOSE FROM: ANGIO/NEURO/INTERVENTIONAL CARDIOLOGY STUDIES (NUC MED) CT SCAN GENERAL RADIOLOGY MAGNETIC RESONANCE IMAGING NUCLEAR MEDICINE ULTRASOUND VASCULAR LAB Select IMAGING TYPE: **U**LTRASOUND	**Enter the Imaging Type you want to edit at this prompt.**
Please indicate how many days each type of data should remain on-line: --- ACTIVITY LOG CUT-OFF: **90**	**This field contains the imaging type parameter that tells the purge routine of the module how many days to keep the various activity logs on-line. The amount of days is a whole number between 90 and 9999.**

Prompt/User Entry:	Directions:
REPORT CUT-OFF: **90**	**This field contains the imaging type parameter that tells the purge routine of the module how many days to keep the reports on-line. The report 'impression' will always stay on-line even after the reports are purged. The amount of days is a whole number between 90 and 9999.**
CLINICAL HISTORY CUT-OFF: **90**	**This field contains the imaging type parameter that tells the purge routine of the module how many days to keep the clinical history of the visit on-line. The amount of days is a whole number between 90 and 9999.**
TRACKING TIME CUT-OFF: **90**	**This field applies to sites that are using the tracking function of the system to record when the exam status changes from one status to another. It contains the imaging type parameter that tells the purge routine of the module how many days to keep the 'tracking time' information on-line. The amount of days is a whole number between 90 and 9999.**

Prompt/User Entry:

Directions:

```
ORDER DATA CUT-OFF: 90
```

This field contains the imaging type parameter that tells the purge routine of the module how many days to keep the orders on-line. The amount of days is a whole number between 30 and 9999.

```
Select IMAGING TYPE: <RET>
```

You can edit more than one type of imaging. Strike the <RET> key at this prompt when you have completed your editing.

```
Do you wish to schedule the data purge? No// ?

Enter 'YES' to schedule the data purge, or 'NO'
not to.


Do you wish to schedule the data purge?
                                    No// Y
           IMAGING TYPES
           -------------
   1) ANGIO/NEURO/INTERVENTIONAL
   2) CARDIOLOGY STUDIES (NUC MED)
   3) CT SCAN
   4) GENERAL RADIOLOGY
   5) MAGNETIC RESONANCE IMAGING
   6) NUCLEAR MEDICINE
   7) ULTRASOUND
   8) VASCULAR LAB

Select Imaging Type(s) to Purge: (1-8): 7
Do you wish to re-purge records that have been
purged in the past? No//<RET>
```

When you finish editing, you are offered the chance to purge the data.
Also, if a purged record has been edited and you want to repurge that record, enter YES at this prompt.
Note: Be sure you have done a system backup before you choose to purge this data.

```
DEVICE: printer name

DO YOU WANT YOUR OUTPUT QUEUED? NO// YES

Requested Start Time: NOW// <RET>
      Request Queued.  Task #: 10157
```

Enter a device name at this prompt and queue the Purge Data Function.
An example of a purge is shown on the next page.

```
Purge data routine started at MAR 1,1994 01:05.

Purging exams/reports.

Purging orders/requests.

Data purge completed at MAR 1,1994  01:18.

The following purge statistics were compiled:

    No. of exam records processed      : 863
    No. of reports processed           : 620
    No. of requests processed          : 796
```

IRM Menu [RA SITEMANAGER]...
Option: Rebuild Distribution Queues [RA RPTDISTREBUILD]

The Rebuild Distribution Queue option allows the user to rebuild distribution files with reports verified on or after a selected date.

Rebuilding the distribution queues will allow the user to reprint reports that have been printed through the Distribution Queue Menu and then purged through the Distribution Queue Purge option. This might be necessary if the original reports were misplaced, a printer has jammed, etc.

This option can also be used if a facility which has not been using Distribution Queues wants to clean out the queues completely and rebuild with only the reports verified after a chosen date. In this way, the queues can be cleared without printing any reports.

Depending on the category of the report and the requirements of the distribution queue, there will be an entry made in the Report Distribution file (#74.4) for each report and the corresponding queue. In other words, if a report has a category of "Outpatient" and both the Clinic Reports Queue and the File Room Queue include outpatient reports, two entries will be made in the Report Distribution file (#74.4).

The output from this option will show the number of reports used to rebuild the distribution files.

This report should be queued to a printer.

Prompt/User Entry:

```
Use only reports verified on or after: 1/1/94
                                (JAN 01, 1994)

QUEUE TO PRINT ON
DEVICE: HOME// 123   RIGHT MARGIN: 80// <RET>

Requested Start Time: NOW//  <RET>  (MAY 20,
1991@07:46:40)
     Request Queued.  Task #: 10041
```

Directions:

This report must be queued to a printer, so enter a printer name at the Device prompt.

Here is an example of the printout.

```
Distribution files rebuilding process beginning at MAY 20,1994  11:40.......

   Total reports used to rebuild files: 11

Distribution files rebuilding process completed at MAY 20,1994  11:41
```

IRM Menu [RA SITEMANAGER]...
Option: Template Compilation [RA COMPILE TEMPLATES]

This option recompiles Radiology/Nuclear Medicine input and print templates which are currently compiled. It is advised that all Radiology/Nuclear Medicine users be off the system while the templates are being recompiled. The user may select compiled templates from any or all of the Radiology/Nuclear Medicine package files that have compiled templates. Also, the user will select the maximum size of the compiled routines.

Prompt/User Entry:	Directions:
Is it ok to continue? No// **YES**	**Answer Yes to compile templates or No to exit the option.**
Maximum routine size on this computer in bytes. (2400-5000) : 5000// **<RET>**	**Enter the maximum routine size for the compiled template routines.**
Select Rad/Nuc Med Input Template: **ALL**	**Enter the names of individual input templates or ALL to compile all existing compiled input templates. Type two question marks to see a list of compiled input templates.**
Another one (Select/De-Select): **<RET>**	**You may add or subtract input templates from the list you have already chosen.**
Select Rad/Nuc Med Print Template: **ALL**	**Enter the names of individual print templates or ALL to compile all existing compiled print templates. Type two question marks to see a list of compiled print templates.**

Here is an example:

```
Template Compilation
     This option will compile all Radiology/Nuclear Medicine input
     and print templates (within the defined file number range) which
     are currently compiled on your system.  Since these templates
     are critical to the operation of the software, it is strongly
     advised that all Radiology/Nuclear Medicine users be off the
     system.  It is also strongly advised that the compilation of
     templates be done when system activity is at a minimum.

Is it ok to continue? No// YES

Maximum routine size on this computer in bytes.  (2400-5000) : 5000// <RET>



Select Rad/Nuc Med Input Template: ??

     Select a INPUT TEMPLATE NAME from the displayed list.
     To deselect a NAME type a minus sign (-)
     in front of it, e.g.  -NAME.
     To get all NAMES type ALL.
     Use an asterisk (*) to do a wildcard selection, e.g.,
     enter NAME* to select all entries that begin
     with the text 'NAME".


Choose from:
   RA EXAM EDIT   File #: 70
   RA ORDER EXAM   File #: 75.1
   RA QUICK EXAM ORDER   File #: 75.1
   RA REGISTER   File #: 70
   RA REPORT EDIT   File #: 74
   RA STATUS CHANGE   File #: 70
   RA VERIFY REPORT ONLY   File #: 74


Select Rad/Nuc Med Input Template: ALL

Another one (Select/De-Select): -RA EXAM EDIT       File #: 70

Another one (Select/De-Select): ??

     Select a INPUT TEMPLATE NAME from the displayed list.
     To deselect a NAME type a minus sign (-)
     in front of it, e.g.  -NAME.
     To get all NAMES type ALL.
     Use an asterisk (*) to do a wildcard selection, e.g.,
     enter NAME* to select all entries that begin
     with the text 'NAME".


You have already selected:
   RA ORDER EXAM   File #: 75.1
   RA QUICK EXAM ORDER   File #: 75.1
   RA REGISTER   File #: 70
```

```
   RA REPORT EDIT   File #: 74
   RA STATUS CHANGE   File #: 70
   RA VERIFY REPORT ONLY   File #: 74

Choose from:
   RA EXAM EDIT   File #: 70


Another one (Select/De-Select): <RET>

Select Rad/Nuc Med Print Template: ALL

Another one (Select/De-Select): ??

     Select a PRINT TEMPLATE NAME from the displayed list.
     To deselect a NAME type a minus sign (-)
     in front of it, e.g.  -NAME.
     To get all NAMES type ALL.

You have already selected:
   RA REPORT PRINT STATUS   File #: 74


Choose from:


Another one (Select/De-Select): <RET>

   Input template to be compiled: RA ORDER EXAM
   For file #75.1: RAD/NUC MED ORDERS
   Routines filed under the following namespace: 'RACTOE'.


Compiling RA ORDER EXAM Input Template of File 75.1...
'RACTOE' ROUTINE FILED.......
'RACTOE1' ROUTINE FILED.......
'RACTOE4' ROUTINE FILED......
'RACTOE5' ROUTINE FILED......
'RACTOE6' ROUTINE FILED..
'RACTOE2' ROUTINE FILED..
'RACTOE3' ROUTINE FILED...
'RACTOE7' ROUTINE FILED.
   Done!
.
.
.

   Print template to be compiled: RA REPORT PRINT STATUS
   For file #74: RAD/NUC MED REPORTS
   Routines filed under the following namespace: 'RACTRT'.


Compiling RA REPORT PRINT STATUS Print Template of File
74.....................
...
'RACTRT' ROUTINE FILED........
   Done!
```

Option: Imaging Type Mismatch Report [RA EXAM/STATUS ITYPE MISMATCH]

This option is not assigned to any menu. It generates a report listing each case where the imaging type of the visit does not match the imaging type of the current exam status. These cases should be edited to 'Complete' as soon as possible to correct the exam status. This mismatch condition should only exist on cases not yet completed at the time V. 4.5 is installed. If not corrected, the mismatches will lead to inaccurate counts on workload reports that depend on the examination status parameters to determine which statuses are included in which reports.

Prompt/User Entry:	**Directions:**

`This report requires a 132 column output device.`
 	
`DEVICE: HOME// device name`
	Select a device to print this report. It should allow 132 columns for display.

An example is not provide here because of the column width of this report. The report lists the patient name, SSN, exam date/time, case number, imaging type of the visit, exam status and imaging type of the exam status for each discrepancy.

HL7 Interface

There are two categories of HL7 interfaces provided with Radiology/Nuclear Medicine V. 4.5: 1) messaging to support a vendor-supplied system that will query DHCP for existing imaging exams for a patient, then select one and enter a report interpreting the image, which is then sent to DHCP; 2) message sent from DHCP whenever an imaging exam is registered, cancelled or reported.

The first category has been used to support voice recognition systems for entering imaging reports. The second category has been used to feed information to picture archiving computer systems (PACS). There are other potential uses that could be determined on a case-by-case basis for the information held in these messages.

In the case of the second category, protocol event points are used and any recipient can become a "subscriber" of the HL7 message. Set-up is required in both DHCP HL7 files and the Protocol file. (In the second category, DHCP sends all messages and receives none.) In the first category, both parties send and receive messages, and the recipients must be set up correctly in the DHCP HL7 package files, but no set-up in the Protocol file is required.

Two Radiology/Nuclear Medicine related entries for the HL7 DHCP Application Parameter file (#771) are exported with this version. They are PACS-RAD-DHCP and RADIOLOGY. These entries are merged with your current entries (i.e., existing data field values on your system will not be altered).

The exported entries look like the following:

1) Name:	**PACS-RAD-DHCP**
Active/Inactive:	**Inactive**
HL7 Encoding Characters:	**~|\&**
HL7 Field Separator:	^

This entry is necessary to support HL7 messages received by vendor-supplied PACS systems from the Radiology/Nuclear Medicine package when exams are registered, cancelled, and reported.

2) Name:	**RADIOLOGY**
Active/Inactive:	**Inactive**
HL7 Encoding Characters:	**~|\&**
HL7 Field Separator:	^
HL7 Message: ACK:	**Processing Routine: none**
HL7 Message: ORF:	**Processing Routine: none**
HL7 Message: ORU:	**Processing Routine: RAHLO**
HL7 Message: QRY:	**Processing Routine: RAHLQ**

This entry is necessary for HL7 message exchange between vendor-supplied voice recognition units (or other report creating software and hardware).

Please refer to the Health Level Seven package documentation to set up and maintain the Radiology/Nuclear Medicine HL7 interface with any applications your facility has (e.g., voice recognition systems, PACS systems and other vendor or DHCP-to-DHCP applications).

See Appendix A for a description of the specific HL7 messages, segments and fields used when the Rad/Nuc Med package sends/receives an HL7 message.

See Appendix B for instructions on how to edit the RA SEND protocol so that HL7 messages may be sent to another application when a report is verified, or an exam is registered or cancelled.

Since some vendors re-use message numbers, it is very important that you run the Purge HL7 Transmission File Entries option often so as to purge all entries that were successfully transmitted. The HL7 package recommends that this option [HL PURGE TRANSMISSIONS] be queued to run once a day as a background task.

Security

Keys:

RA ALLOC	**The holders of this key overrides the location access security entered through the Personnel Classification process. They have expanded access to imaging locations, imaging types, and divisions. In the case of most workload reports, they can select from a list of all divisions and imaging types to include on the report. In the case of various edit and ordering functions, they can select from all locations within an imaging type currently signed on through the "Select sign-on location:" prompt.**
RA MGR	**The holders of this key have access to supervisor-type functions. They can: 1) edit completed exams, 2) add exams to a visit that is older than yesterday, 3) see all non-completed exams during the execution of the Status Tracking of Exams option, 4) update the exam status of a completed exam, 5) delete exams, 6) delete reports, and 7) unverify reports.**
RA VERIFY	**Allows the holder to verify reports.**

Sign-on Security:

Upon entering a Radiology/Nuclear Medicine menu, the user is prompted to select a "sign-on Imaging Location". The set of locations the user is privileged to access is controlled by the ADPAC or IRM through the Classification Enter/Edit option. Most options are screened by a combination of Imaging Type, Division and Location. Others are screened by ownership. For a thorough discussion of how users are allowed into the Radiology/Nuclear Medicine package options see the Screening Methods section of the Radiology/Nuclear Medicine V. 4.5 ADPAC Guide.

Electronic Signature:

Interpreting Resident physicians and Interpreting Staff physicians must enter their electronic signature if they wish to use the On-line Verifying of Reports option or the Resident On-line Pre-Verification option.

VA FileMan File Protection:

#	Name	DD	RD	WR	DEL	LAYGO
34	Contract/Sharing Agreements	@				
70	Rad/Nuc Med Patient	@				
71	Rad/Nuc Med Procedures	@				
71.1	Major Rad/Nuc Med AMIS Codes	@				
71.2	Procedure Modifiers	@				
71.3	Rad/Nuc Med Common Procedure	@				
71.4	Rad/Nuc Med Procedure Message	@				
71.5	Imaging Stop Codes	@				
72	Examination Status	@				
74	Rad/Nuc Med Reports	@				
74.1	Standard Reports	@				
74.2	Report Batches	@				
74.3	Report Distribution Queue	@				
74.4	Report Distribution	@				
75.1	Rad/Nuc Med Orders	@				
75.2	Rad/Nuc Med Reason	@				
78.1	Complication Types	@				
78.2	Flash Card Formats	@				
78.3	Diagnostic Codes	@				
78.4	Film Sizes	@				
78.6	Camera/Equip/Rm	@				
78.7	Label Print Fields	@				
79	Rad/Nuc Med Division	@				
79.1	Imaging Locations	@				
79.2	Imaging Type	@				

Legal Requirements:

The Radiology/Nuclear Medicine package uses the Current Procedural Terminology (CPT) coding system which is an American Medical Association (AMA) copyrighted product. Its use is governed by the terms of the agreement between the Department of Veterans Affairs and the AMA.

Routine Descriptions

Name	Description
RABTCH	**Supports the following batch options: List Batch Entries, Print a Batch and Remove/Add a Report from a Batch.**
RABTCH1	**Supports the following batch options: Verify a Batch and Delete a Batch.**
RABTCH2	**Supports the Delete Printed Batches by Date option.**
RABTCH3	**Supports the Delete Printed Batches option.**
RABUL	**Generates a bulletin to a mail group whenever a request is cancelled.**
RABUL1	**Generates a bulletin to a mail group whenever an exam is deleted.**
RABUL2	**Generates a bulletin to a mail group whenever a report is unverified.**
RABUL3	**Generates a bulletin to a mail group whenever a report in deleted.**
RACDR	**Supports the Cost Distribution Report option.**
RACDR1	**Continues RACDR routine.**
RACMP	**Supports the Complication Report option.**
RACMP1	**Continues RACMP routine.**
RACMP2	**Continues RACMP routine.**
RACMPLE	**Supports the Template Complication option. Recompiles all of the package's input and print templates that are currently compiled.**
RACNLU	**Generates a list of exams for selection by case number or sequential number.**
RACPT	**Supports the Procedure/CPT Statistics Report option.**
RACPT1	**Continues RACPT routine.**
RADD1	**This routine consists of subroutines called from data dictionary input transforms.**

RADD2	**This routine consists of subroutines called from data dictionary input transforms.**
RADEM	**Displays patient demographic information.**
RADEM1	**Displays the last five Radiology/Nuclear Medicine procedures performed on a specified patient.**
RADEM2	**Displays brief patient demographic information.**
RADLQ1	**Supports the following options: Delinquent Status Report and Incomplete Exam Report.**
RADLQ2	**Continues RADLQ1 routine.**
RADLQ3	**Continues RADLQ1 routine.**
RADLY	**Supports the Daily Log Report option.**
RADLY1	**Continues RADLY routine.**
RADPA	**Used to select a patient.**
RAEDCN	**Supports the following options: Case No. Exam Edit, Diagnostic Code Entry by Case No., Indicate No Purging of an Exam/report, Cancel an Exam, Exam Deletion, View Exam by Case No. and Duplicate Flash Card.**
RAEDCN1	**Continues RAEDCN routine.**
RAEDPT	**Supports the Edit Exam by Patient option.**
RAESO	**Supports the following options: Override a Single Exam Status to 'Complete', Mass Override Exam Status and Examination Status Entry/Edit.**
RAESR	**Supports the Examination Statistics option.**
RAESR1	**Continues RAESR routine.**
RAESR2	**Continues RAESR routine.**
RAESR3	**Continues RAESR routine.**
RAFLH	**Prints flash cards.**
RAFLH1	**Prints exam labels.**

RAFLH2	**Uses division, location and procedure parameters to determine if a flash card should be printed.**
RAFLM	**Supports the Film Usage Report option.**
RAFLM1	**Continues RAFLM routine.**
RAFLM2	**Continues RAFLM routine.**
RAFLM3	**Continues RAFLM routine.**
RAHLO	**Processes observation results unsolicited (ORU) Health Level 7 (HL7) messages.**
RAHLO1	**Continues RAHLO by filing the ORU data in File #74.**
RAHLQ	**Processes a query type (QRY) HL7 message.**
RAHLQ1	**Builds an observational report response (ORF) type HL7 message.**
RAHLR	**Builds a common order (ORC) HL7 message.**
RAHLRPC	**Contains various entry points which invoke protocols to create HL7 messages when a report is verified or an exam is registered or cancelled.**
RAHLRPT	**Builds an observational results unsolicited (ORU) HL7 message.**
RAIENVCK	**Performs an environment check before installing this version of the package.**
RAIPRE	**One of three pre-installation routines. It defines checkpoints used by the Kernel Installation and Distribution System (KIDS) to install this version of the package.**
RAIPRE1	**This pre-installation routine does the following: assigns an imaging type of "General Radiology" to all existing entries in the Examination Status file (#72), deletes the RA MOREMENUS option from the Option file (#19) and identifies users who were assigned that menu, deletes the "C" cross-reference from File #72, and deletes the screen on the Modifiers field (#125) in the Examinations multiple of the Rad/Nuc Med Patient file (#70).**

RAIPRE2	**This pre-initialization routine does the following: re-indexes the "AD" cross-reference on the Report Distribution file (#74.4), deletes the Modifiers field (#12) and associated subfile from the Rad/Nuc Med Common Procedures file (#71.3), deletes the Type of Imaging field (#3) from the Rad/Nuc Med Procedure Modifiers file (#71.2), changes the names of package bulletins from "Radiology..." to "Rad/Nuc Med...", deletes data from the Contrast Medium Allergy field (#.05) in File #70, deletes the data dictionary definition of Contrast Medium Allergy, deletes the trigger cross-reference on the Complication field in File #70, and deletes the "ATS" cross-reference on the Name field (#.01) in File #70.**
RAIPST	**This routine is one of three post-installation routines. It acts as the post-installation driver routine and defines checkpoints which KIDS uses to track progress in the post-installation process.**
RAIPST1	**This post-installation routine does the following: Identifies users who are classified as both Resident and Staff, and removes the Resident classification, deletes File #72 entries of the imaging type of "General Radiology" which were not on the system before the initialization process began, populates the new Type of Imaging multiple in File #71.2, kills and re-indexes the "B" and "C" cross-references on the Rad/Nuc Med Procedures file (#71), kills and re-indexes the "BIMG" cross-reference on the Imaging Locations file (#79.1), kills and re-indexes the "ASTAT" cross-reference on the Rad/Nuc Med Reports file (#74), kills and re-indexes the "AIMG" cross reference on File #71, kills and re-indexes the "AA" cross-reference on File #71.3, and sends a message to the Order Entry/Reporting (OE/RR) package with all the Radiology/ Nuclear Medicine procedures if OE/RR V. 3.0 is installed.**
RAIPST2	**This post-installation routine does the following: reads through File #71, looks up the procedure in the AMIS category table to find the stop code, moves that stop code value into the procedure entry, and deletes all Stop Codes in the Credit Clinic Stop field (#3) of File #71.1.**
RAJAC	**Prints film jacket labels.**
RALIST	**Supports the AMIS Code Dump by Patient option.**
RALIST1	**Continues RALIST routine.**
RALWKL	**Supports the following functional area workload options: Ward Report, Service Report, PTF Bedsection, Clinic Report and Sharing Agreement/Contract Report.**

RALWKL1	**Continues RALWKL routine.**
RALWKL2	**Continues RALWKL routine.**
RALWKL3	**Continues RALWKL routine.**
RALWKL4	**Continues RALWKL routine.**
RAMAIN	**Supports the following options: Major AMIS Code Entry/Edit, Film Type Entry/Edit, Diagnostic Code Enter/Edit, Flash Card/Label Formatter, Complication Type Entry/Edit, Sharing Agreement/Contract Entry/Edit, Standard Reports Entry/Edit, Procedure Modifier Entry, Reports Distribution Edit and Procedure Message Entry/Edit.**
RAMAIN1	**Supports the Examination Status Entry/Edit option. Also, acts as a utility routine for the RAMAIN routine.**
RAMAIN2	**Supports the following options: Procedure Type Enter/Edit and Common Procedure Enter/Edit.**
RAMAINP	**Supports the following print options: Examination Status List, Active Procedure List (Long), Major AMIS Code List, Film Sizes List, Diagnostic Code List, Flash Card/Label List, Complication Type List, Sharing Agreement/Contract List, Active Procedure List (Short), Inactive Procedure List (Long), List of Inactive Procedures (Short), Series of Procedures List, Standard Reports Print, Modifier List, Alpha Listing of Active Procedures, Report Distribution Lists and Procedure Message List.**
RAMIS	**Supports the AMIS Report option.**
RAMIS1	**Continues RAMIS routine.**
RAMIS2	**Continues RAMIS routine.**
RAO7CH	**Creates and sends a HL7 message from the Radiology/ Nuclear Medicine package to OE/RR V. 3.0 to put a Radiology/Nuclear Medicine order in a Discontinued or Hold status. A second entry point creates and sends a HL7 message to OE/RR V. 3.0 when an exam status has been downgraded from Complete.**
RAO7CMP	**Creates and sends a HL7 message from the Radiology/ Nuclear Medicine package to OE/RR V. 3.0 to put a Radiology/Nuclear Medicine order in a Complete status.**

RAO7MFN	**Builds a master files notification (MFN) HL7 message that contains one or all of the procedures for either File #71 or File #71.3.**
RAO7NEW	**Creates and sends a HL7 message from the Radiology/ Nuclear Medicine package to OE/RR V. 3.0 to create an entry in the Order file (#100).**
RAO7OKR	**Processes a general order message (ORM) HL7 message received from OE/RR V. 3.0.**
RAO7OKS	**Creates and sends a general order message (ORM) HL7 message to OE/RR V. 3.0 indicating that the Radiology/ Nuclear Medicine package accepted or rejected OE/RR's earlier message concerning an order.**
RAO7PC1	**This routine has four entry points. Two entry points return exam information. One entry point returns imaging locations. One entry point returns the narrative text for an exam. These entry points are meant for OE/RR V. 3.0 use.**
RAO7PC2	**This routine is called from RAO7PC1. It collects narrative text for an exam.**
RAO7RCH	**Processes a HL7 message received from OE/RR V. 3.0 which requests that a Radiology/Nuclear Medicine order be placed in a Discontinued status.**
RAO7RO	**Receives a HL7 message from OE/RR V. 3.0, files the data in File #75.1, and sends the appropriate accept/reject message back to the OE/RR package.**
RAO7RO1	**This routine contains the text of data errors found when validating a HL7 message received from the OE/RR V. 3.0.**
RAO7RON	**This routine validates the data for a new request/order received in a HL7 message from OE/RR V. 3.0.**
RAO7RON1	**This routine continues RAO7RON.**
RAO7SCH	**This routine creates and sends a HL7 message to OE/RR V. 3.0 which indicates an order is to be placed in a status of Scheduled.**
RAO7UTL	**This routine is a utility routine used to build and process HL7 messages.**
RAO7UTL1	**This routine is a utility routine used to build and process HL7 messages.**

RAO7VLD	**This routine is used to validate data received in HL7 messages.**
RAORD	**Supports the following options: Schedule a Request, Cancel a Request, Hold a Request and Print Selected Requests by Patient.**
RAORD1	**Supports the Request an Exam option.**
RAORD1A	**Allows editing of Category of Exam and Requesting Location field values (File #75.1) when entering a request.**
RAORD2	**Supports the Detailed Request Display option.**
RAORD3	**Continues RAORD2 routine.**
RAORD4	**Supports the Print Rad/Nuc Med Requests by Date option.**
RAORD5	**Prints a request in a Radiology Consultation (VA Form 519a) format.**
RAORD6	**Continues RAORD5 routine.**
RAORD7	**Supports the Log of Scheduled Requests by Procedure option.**
RAORD7A	**Continues RAORD7 routine.**
RAORD8	**Supports the Ward/Clinic Scheduled Request Log for a option.**
RAORDC	**Cancels/holds a request when the corresponding exam is cancelled and updates a request when the corresponding exam is complete.**
RAORDC1	**Continues RAORDC routine.**
RAORDP	**Supports the Pending/Hold Rad/Nuc Med Request Log option.**
RAORDQ	**Queues requests for printing.**
RAORDS	**Generates a list of requests for a specified patient for selection by sequential number.**
RAORDU	**Updates the status of a request in the Rad/Nuc Med Orders file (#75.1), creates orders in the OE/RR Orders file (#100), and deletes unreleased requests that are discontinued from the OE/RR Orders file.**

RAORDU1	**Creates protocols in the OE/RR Protocol file (#101) from entries in the Rad/Nuc Med Common Procedure file (#71.3) and displays information concerning requests prior to entering the requests in the Rad/Nuc Med Orders file (#75.1).**
RAORR	**Called by the OE/RR package (OE/RR V. 2.5 only) and processes information passed by the OE/RR package (V. 2.5) to the Radiology/Nuclear Medicine package. Acts as the driver routine when an OE/RR user enters, edits or views a request.**
RAORR1	**Called by RAORR to edit a new or unreleased order.**
RAORR2	**Called by RAORR to verify a new or unreleased order.**
RAORR3	**Called from the RAORD2 routine. This routine displays Radiology/Nuclear Medicine results to the OE/RR (V. 2.5 only) package user.**
RAOUT	**Supports the following options related to outside films: Add Films to Registry, Edit Registry, Flag Film to Need 'OK' Before Return, Delinquent Outside Film Report for Outpatients and Outside Films Profile.**
RAPAST	**Supports the Enter Last Past Visit Before DHCP option.**
RAPERR	**Supports the Invalid CPT/Stop Code List option.**
RAPNL	**Supports the following options: Personnel Classification Enter/Edit, Technologist List, Interpreting Resident List, Interpreting Staff List and Clerical List.**
RAPRC	**Supports the Detailed Procedure Report option.**
RAPRC1	**Continues RAPRC routine.**
RAPRI	**Supports the Display Common Procedure List option.**
RAPRINT	**Supports the Abnormal Exam Report option.**
RAPRINT1	**Continues RAPRINT routine.**
RAPROD	**Displays detailed information on a specified exam.**
RAPROD1	**This routine continues RAPROD and displays information in the activity log, status tracking log and the Rad/Nuc Med Report file for a specified exam.**
RAPROQ	**Supports the Profile of Rad/Nuc Med Exams option.**

RAPROS	**Supports the Exam Profile (selected sort) option.**
RAPSET	**Sets up system-wide variables and default parameters for a user.**
RAPSET1	**This routine continues RAPSET and displays the default parameters that were set up by the RAPSET routine. Also, it supports the Switch Locations option.**
RAPTLU	**Generates a list of exams for a specified patient for selection by sequential number. Also, it supports the Update Patient Record option.**
RAPURGE	**Supports the Purge Data Function option.**
RAPURGE1	**Continues RAPURGE routine.**
RARD	**This is a utility routine that is called by many other routines in the package for the purpose of listing a set of choices to the user and processing the user's selection.**
RAREG	**Supports the following options: Register Patient for Exam and Add Exams to Last Visit.**
RAREG1	**Continues RAREG routine.**
RAREG2	**Continues RAREG routine.**
RAREG3	**Continues RAREG routine**
RARIC	**Used by the Imaging package V 1.0 to create an entry in File #74 and to link a File #74 report with a radiologic image (File #2005).**
RART	**Supports the Verify Report Only option.**
RART1	**Supports the following options: Select Report to Print by Patient, Draft Report (Reprint), and Display a Rad/Nuc Med Report.**
RARTE	**Supports the Report Entry/Edit option.**
RARTE1	**Supports the following options: Unverify a Report and Delete a Report.**
RARTFLDS	**This is a utility routine that returns information concerning the associated exam for a report.**

RARTR	**Prints a report.**
RARTR0	**Continues RARTR routine.**
RARTR1	**Continues RARTR routine.**
RARTRPV	**Supports the Resident On-line Pre-Verification option.**
RARTRPV1	**Continues RARTRPV routine.**
RARTST	**Supports the following options: Autopurge of Distribution Queues, Distribution Queue Purge, and Rebuild Distribution Queues.**
RARTST1	**Supports the following report distribution options: Print by Routing Queue, Individual Ward, Single Clinic, Activity Logs, Unprinted Reports List, Clinic Distribution List, Ward Distribution List and Report's Print Status.**
RARTST2	**Continues RARTST1 routine.**
RARTST2A	**Continues RARTST1 routine.**
RARTST3	**Continues RARTST1 routine.**
RARTUVR	**Supports the Unverified Reports option.**
RARTUVR1	**This routine continues RARTUVR.**
RARTVER	**Supports the On-line Verifying of Reports option.**
RARTVER1	**Continues the RARTVER routine.**
RARTVER2	**Continues the RARTVER routine.**
RASELCT	**This is a generic file entry selection routine. It allows the user to select one, many or all records in a file.**
RASERV	**This is a utility routine that is called in order to determine the ward, service and bedsection of an inpatient.**
RASETU	**This routine looks at the statuses of exams generated from a request to determine the status of that request.**
RASIGU	**This routine prompts for the user's electronic signature code and checks that it is valid.**

RASITE	**Supports the following IRM options: Device Specifications for Imaging Locations, Failsoft Parameters and Imaging Type Activity Log.**
RASTAT	**Supports the Status Time Report option.**
RASTED	**Supports the Status Tracking of Exams option.**
RASTEXT	**Generates and displays a list of exams by examination status.**
RASTEXT1	**This routine continues RASTEXT and processes selections made from the list of exams generated by the RASTEXT routine. If the selection is valid, it is passed to the RASTED routine for editing.**
RASTREQ	**This is a utility routine that is called whenever the package attempts to update the status of an exam. This routine verifies that all required data has been entered in order for the examination status to move to the next higher level.**
RASTREQ1	**Continues RASTREQ routine.**
RASTRPT	**Called from the RASTAT routine to print the Status Tracking Statistics report.**
RASYS	**Supports the following system definition options: Division Parameter Set-up, Print Division Parameter List, Location Parameter Set-up, Location Parameter List, Camera/Equip/Rm Entry/edit and List of Cameras/Equip/Rm option.**
RATRAN	**Supports the Transcription Report option.**
RAUTL	**A utility routine that supports the following functions: date range selection, generic device selection, help display for device fields in File #79.1, verify access code, store the signature block code in File #200, and close device logic.**
RAUTL0	**A utility routine that supports the following functions: updates the status of a report and a clinic stop credit interface to the Scheduling package.**

RAUTL1	**A utility routine that supports the following functions: conversion of pointer values to external values for ward, clinic, sharing/contract agreement and research source, calculation of the current time, calculation of the elapsed time between two dates, conversion of date to minutes and seconds, determination of whether a report should be included in a package output, and notifying OE/RR to send an alert after a patient is examined. Also, it supports the Update Exam Status option.**
RAUTL10	**A utility routine that updates the patient location in File #74.4.**
RAUTL11	**A utility routine that supports the List Exams with Inactive/Invalid Statuses option.**
RAUTL12	**A utility routine that supports the following functions: determines imaging type, locks/unlocks a global, determines AMIS credit indicator based on a modifier, determines a patient's current location, and prompts the user for the Date Desired (Not guaranteed) field (#21) in File #75.1.**
RAUTL13	**A utility routine that supports the following functions: determines if current patient location is different than the request location, generic one/many/all selection for locations within an imaging type, a screen used on the Imaging Location field (#20) in File #75.1, and a screen used on the Imaging Location field (#8) in File #71.3.**
RAUTL14	**A utility routine that supports the following functions: determines if the first thirty characters of a procedure name are unique, displays a message that is called from the input transform of the Type of Imaging field (#6) of File #79.1, and displays a message from the input transform of the Type of Imaging field (#12) of File #71.**
RAUTL15	**A utility routine that supports the following functions: deletes an entry from File #74 if no data is entered and cleans up any pointers, determines if an order can be placed in a status of Cancel, Hold or Scheduled, and determines if a request has a File #100 pointer value.**
RAUTL16	**A utility routine that supports the the Imaging Type Mismatch Report.**
RAUTL16A	**A utility routine that supports the the Imaging Type Mismatch Report.**

RAUTL17 A utility routine that supports the following functions: allows the user to select from active imaging types, common procedure file error check, returns an imaging type of a procedure, updates the "AA" cross-reference on File #71.3, and displays a message from the input transform of Procedure field (#.01) of File #71.3.

RAUTL18 A utility routine that supports the following functions: checks/deletes the Descendent multiple in File #71 when the Type of Procedure changes, and displays the available sequence numbers for the current imaging type during the Common Procedure Enter/Edit option.

RAUTL19 A utility routine that supports the following functions: does a data inconsistency check on exam statuses and locks/unlocks a patient record using OE/RR package calls

RAUTL2 A utility routine that supports the following functions: sets variables related to an exam based upon the corresponding report entry, sets and kills the "ARES" and "ASTF" cross-references in File #74, concatenates all the modifiers for an exam together in one line separated by commas, checks whether a procedure requires an approval, checks for duplicate requests for the same patient, checks that a user is still active, and checks that at least one division and one location have been entered in Files #79 and #79.1, respectively.

RAUTL3 A utility routine that supports external calls to the Radiology/Nuclear Medicine package by other DHCP packages. There is an entry point to support a call by the AMIE package. An entry for the Adverse Reaction Tracking package (formerly Gen. Med. Rec.-Allergies) exists, but it is being phased out.

RAUTL4 A utility routine that supports the following functions: a special input transform for the Report Status field (#5) of File #74, a utility to prompt for the selection of one or many entries from a list, converting lowercase to uppercase characters, and displays a message when the Order field (#3) of an entry in File #72 is null.

RAUTL5	**A utility routine that supports the following functions: populates the Clinical History field (#400) in File #74, acts as part of the input transform of the Inactivation Date field (#125) of File #74.3 to check for unprinted reports associated with a report, returns the external form of the attending physician and primary physician, generates a generic end-of-screen prompt, converts internal values to external values, and displays an appropriate procedure message to an OE/RR user.**
RAUTL6	**A utility routine that determines the imaging location, imaging type and division access for a user. Creates the RACCESS array.**
RAUTL7	**A utility routine that determines the division and imaging type access based on imaging location.**
RAUTL7A	**Continues RAUTL7 routine.**
RAUTL8	**A utility routine that supports the following functions: supports the input transform of the Procedure field of File #70, returns statuses of requests that were selected, a screen used to select primary and secondary interpreting physicians in File #70.**
RAUTL9	**A utility routine that supports the following functions: allows user to enter lower/uppercase characters when answering a Report Status prompt (File #74), prompts residents who are in the Resident On-line Pre-Verification option if they wish to pre-verify the report, checks if word-processing data exists for the report, impression and clinical history fields, displays word-processing text, removes pointers from Files #74.2 and #74.4 when a report is deleted, and checks TaskMan variable to determine if the user has requested a tasked job to halt.**
RAWFR1	**Supports the Wasted Film Report option.**
RAWFR2	**Continues RAWFR1 routine.**
RAWFR3	**Continues RAWFR1 routine.**
RAWFR4	**Continues RAWFR1 routine.**
RAWKL	**Supports the following personnel workload report options: Technologist Report, Resident Report, Staff Report, Physician Report and Camera/Equip/Rm Report.**
RAWKL1	**Continues RAWKL routine.**

RAWKL2	**Continues RAWKL routine.**
RAWKL3	**Continues RAWKL routine.**
RAWORK	**Supports the Print Worksheets option.**
RAXREF	**Has entry points to set or kill cross-references when the following values are provide: data dictionary number, field number, field value to be cross-referenced and DA or DA array.**

The following routines are compiled from various input and print templates.

Name	Description
RACTEX*	**These routines are compiled from the File #70 input template RA EXAM EDIT.**
RACTOE*	**These routines are compiled from the File #75.1 input template RA ORDER EXAM.**
RACTQE*	**These routines are compiled from the File #75.1 input template RA QUICK EXAM ORDER.**
RACTRG*	**These routines are compiled from the File #70 input template RA REGISTER.**
RACTRT*	**These routines are compiled from the File #74 print template RA REPORT PRINT STATUS.**
RACTTK*	**These routines are compiled from the File #70 input template RA STATUS CHANGE.**
RACTVR*	**These routines are compiled from the File #74 input template RA VERIFY REPORT ONLY.**
RACTWR*	**These routines are compiled from the File #74 input template RA REPORT EDIT.**

The following routines are recommended for mapping:

RABTCH*	**RACNLU**	**RACT***	**RADEM***	**RADPA**	**RAEDCN***
RAEDPT	**RAFLH***	**RAHL***	**RAJAC**	**RAORD***	**RAPROD***
RAPROQ	**RAPSET***	**RAPTLU**	**RAREG***	**RART***	**RARTE***
RARTR*	**RASERV**	**RASTED**	**RASTEXT***	**RASTREQ***	**RAUTL***

File List

Files:

File Number File Name	Global File Description
34 **Contract/Sharing Agreements**	**^DIC(34** **This file contains the Contract and Sharing agreements used in the Radiology/Nuclear Medicine package.** **No data comes with this file.**
70 **Rad/Nuc Med Patient**	**^RADPT(** **This file contains imaging information for patients. It is the focal point of the package.** **No data comes with the file.**
71 **Rad/Nuc Med Procedures**	**^RAMIS(71** **This file contains all the procedures that may be associated with an imaging exam. If the procedure has an inactivation date less than the current date then it is not a valid choice and will not appear as a selection to the user. Entries should be deactivated rather than deleted.** **Data comes with the file. It is ADDed ONLY IF NEW to the site's existing entries (i.e., data is entered only if this is a new file or the file does not already contain data). Only procedures with a "Y" in the Original Procedure field (#8) and are active are exported with this version.**
71.1 **Major Rad/Nuc Med AMIS Codes**	**^RAMIS(71.1** **This file contains the valid AMIS codes, descriptions and weighted work units as assigned by VACO. The data in this file is used in the compilation of various workload reports.** **Data comes with this file. It is ADDed ONLY IF NEW to the site's existing entries.**

71.2 **Procedure Modifiers**	**^RAMIS(71.2** **This file contains the modifiers that can be associated with an imaging exam. These modifiers are used to further describe the procedure associated with the exam.** **Data comes with the file. It is ADDed ONLY IF NEW to the site's existing entries. Only modifiers with an internal entry number of less than 6 are exported with this version.**
71.3 **Rad/Nuc Med Common Procedure**	**^RAMIS(71.3** **This file contains the procedures used in the display of the common procedures when requesting a procedure. Forty active procedures are allowed per imaging type.** **No data comes with the file.**
71.4 **Rad/Nuc Med Procedure Message**	**^RAMIS(71.4** **This file contains messages concerning special requirements when ordering a procedure. One or more of these messages can be tied to a procedure in the Rad/Nuc Med Procedures file (#71) so that they are displayed to a requestor at the time an order is placed.** **No data comes with the file.**
71.5 **Imaging Stop Codes**	**^RAMIS(71.5** **This file contains valid stop codes that are used as a screen for selecting stop codes to associate with Radiology/Nuclear Medicine procedures.** **No data comes with the file.**
72 **Examination Status**	**^RA(72** **This file contains the statuses an imaging exam may be in, as it is processed.** **Data comes with the file. It is MERGE'd with existing entries.**
74 **Rad/Nuc Med Reports**	**^RARPT(** **This file contains the reports for registered exams.** **No data comes with this file.**

74.1 **Standard Reports**	**^RA(74.1** **This file contains the standard report text the interpreting physician can choose from when dictating a report.** **No data comes with this file.**
74.2 **Report Batches**	**^RABTCH(74.2** **This file provides the mechanism to group draft reports into logical categories to help in the efficient processing of these reports.** **No data comes with this file.**
74.3 **Report Distribution Queue**	**^RABTCH(74.3** **This file contains the names of the distribution queues and the category of reports for each queue.** **Data comes with this file. It is ADDed ONLY IF NEW to the site's existing entries. Only modifiers with an internal entry number of less than 6 are exported with this version.**
74.4 **Report Distribution**	**^RABTCH(74.4** **This file points to the Rad/Nuc Med Reports file (#74). It contains the only verified reports associated with the various active distribution queues.** **No data comes with this file.**
75.1 **Rad/Nuc Med Orders**	**^RAO(75.1** **This file contains all information pertaining to an imaging order entered for a patient.** **No data comes with this file.**
75.2 **Rad/Nuc Med Reason**	**^RA(75.2** **This file contains the reasons a user may select from when placing an order in the Hold or Cancelled status.** **Data comes with this file. It is ADDed ONLY IF NEW to the site's existing entries. Only reasons with an internal entry number of less than 23 are exported with this version.**

78.1 **Complication Types**	**^RA(78.1** **This file contains the types of complications that may occur while a procedure is being performed.** **Data comes with this file. It is ADDed ONLY IF NEW to the site's existing entries. Only complication types with an internal entry number of less than 3 are exported with this version.**
78.2 **Flash Card Formats**	**^RA(78.2** **This file contains the print formats for flash cards, exam labels, jacket labels, report headers and report footers.** **No data comes with this file.**
78.3 **Diagnostic Codes**	**^RA(78.3** **This file contains the diagnostic codes that can be associated with an exam. The diagnostic code represents a quick overall summary of what the interpreting physician wrote in the report concerning the exam. The diagnostic code is not the impression. The impression is stored in the Impression field (#300) of the Rad/Nuc Med Reports file (#74).** **Data comes with this file. It is ADDed ONLY IF NEW to the site's existing entries. Only reasons with an internal entry number of less than 9 are exported with this version.**
78.4 **Film Sizes**	**^RA(78.4** **This file contains the allowable film sizes that the technologist can choose from when entering the film data for an exam.** **No data comes with this file.**
78.6 **Camera/Equip/Rm**	**^RA(78.6** **This file contains all the rooms that may be used to perform imaging examinations. The Imaging Locations file (#79.1) uses this file to indicate which rooms are allowable choices when the technologist attaches a camera/equipment/room to an exam that is performed.** **No data comes with this file.**

78.7 **Label Print Fields**	**^RA(78.7** **This file contains the names of the data fields that can be printed on a flash card, exam label, jacket label, report header and report footer. The formats indicating which fields to print are stored in the Flash Card Formats file (#78.2).** **Data comes with this file. It OVERWRITE's existing entries in the site's data.**
79 **Rad/Nuc Med Division**	**^RA(79** **The package is designed to handle multiple divisions within a medical center. This file contains, for each division entry, parameters that the package uses during various stages of exam and report processing.** **No data comes with this file.**
79.1 **Imaging Locations**	**^RA(79.1** **Within an imaging division there may be a number of physical locations where an imaging procedure can be performed. This file contains for each imaging location entry, parameters that the module uses during various stages of exam and report processing and inquiring.** **No data comes with this file.**
79.2 **Imaging Type**	**^RA(79.2** **This file contains for each imaging type entry parameters that the package uses during various stages of exam and report processing. The parameters allow the customizing of the package for each type of imaging.** **Data comes with the file. It is MERGE'd with existing entries.**
200 **New Person**	**^VA(200** **A partial data dictionary is sent with this package. It includes the fields #70-74. These fields are specific to the Radiology/Nuclear Medicine package.** **No data comes with the file.**

771 **HL7 DHCP Application Parameter**	**^HL(771** **The data dictionary is not sent with this package. No updating is done to the data dictionary.** **Two entries are sent with this Build. The entries are MERGE'd with the existing entries.**

Templates:

Input Templates:

File	Name	Description
70	RA CANCEL	This template is used to cancel exams.
70	RA DIAGNOSTIC BY CASE	This template is used by the Diagnostic Code Entry by Case No. option.
70	RA EXAM EDIT	This template is used to edit exams. It is compiled into the RACTEX* routines.
70	RA LAST PAST VISIT	This template is used when adding the last visit prior to implementing the DHCP Radiology/Nuclear Medicine package.
70	RA NO PURGE SPECIFICATION	This template is used to set the no purge flag for an exam in the Indicate No Purging of an Exam/report option.
70	RA OUTSIDE ADD	This template is used to enter outside films for tracking purposes.
70	RA OUTSIDE EDIT	This template is used to edit information on outside film tracking.
70	RA OUTSIDE SUPEROK	This template is used to flag an outside film as needing a supervisor's concurrence in order to be released.
70	RA OVERRIDE	This template is used to override the status of an exam and set it to Complete.
70	RA REGISTER	This template is used to register patients for exams. It is compiled into the RACTRG* routines.
70	RA STATUS CHANGE	This template is used for the Status Tracking of Exams option. It is compiled into the RACTTK* routines.
71	RA PROCEDURE EDIT	This template is used to enter and edit procedures.
71.3	RA COMMON PROCEDURE EDIT	This template is used to set up and change the common procedure display used when requesting an exam.

72	RA STATUS ENTRY	This template is used to enter and edit a status for an exam.
74	RA PRE-VERIFY REPORT EDIT	This template is used by interpreting resident physicians to edit and pre-verify their reports.
74	RA PRE-VERIFY REPORT ONLY	This template is used by interpreting resident physicians to pre-verify their reports only.
74	RA REPORT EDIT	This template is used to enter and edit reports in File #74. It is compiled into the RACTWR* routines.
74	RA VERIFY REPORT ONLY	This template is used to verify reports in File #74. It is compiled into the RACTVR* routines.
74.1	RA STANDARD REPORT ENTRY	This template is used to enter standard reports into File #74.
74.3	RA DISTRIBUTION EDIT	This template is used in the Reports Distribution Edit option.
74.3	RA DISTRIBUTION LOG	This template is used to enter data in the activity log of File #74.3.
75.1	RA OERR EDIT	This template is to edit requests by OE/RR V. 2.5 users. It is compiled into the RACTOE* routines.
75.1	RA ORDER EXAM	This template is used to request an exam.
75.1	RA QUICK EXAM ORDER	This template is used by OE/RR V. 2.5 users for ordering an exam. It is compiled into the RACTQE* routines.
78.2	RA FLASH CARD EDIT	This template is used to enter and edit flash cards, jacket labels, exam labels, report headers and report footers.
79	RA DIVISION PARAMETERS	This template is used to enter division parameters for the package.
79.1	RA LOCATION PARAMETERS	This template is used to enter the location parameters for the package.

79.1	**RA SITE MANAGER**	**This template is used by the IRM Service to define input and printing devices for the package.**
79.2	**RA IMAGE PARAMETERS**	**This template is used to enter parameters for an imaging type.**
79.2	**RA ON-LINE CRITERIA**	**This template is used to enter data associated with the storing of on-line data for an imaging location.**
200	**RA PERSONNEL**	**This template is used to enter Radiology/ Nuclear Medicine personnel into the package.**

Sort Templates:

File	Name	Description
70	RA DAILY LOG	This template is used to sort exams by exam date and hospital division.
70	RA OUTSIDE LIST	This template is used to sort the outside film registry.
71	RA ALPHA LIST OF ACTIVES	This template is used to determine which procedures are active and put them in alphabetical order.
71	RA PROCEDURES BY AMIS	This template is used to sort procedures by major AMIS code.
71	RA PROCEDURES BY AMIS CODES	This template sorts procedures by AMIS code and then by CPT code.
71	RA SERIES ONLY	This template is used to sort procedures by "Series" type only.
74.4	RA ALL UNPRINTED	This template is used to sort the Unprinted Reports List for the report distribution queue.
74.4	RA CLINIC BY PRINT DATE	This template sorts the distribution queue by clinic location. Also, it sorts reports by print status.
74.4	RA WARD BY PRINT DATE	This template sorts reports in the ward distribution queue by print date.
78.2	RA FLASH PRINT	This template sorts print formats by name for printing label set-ups.
79.1	RA EXAM ROOM LIST	This template sorts examination rooms by Radiology/Nuclear Medicine location.
79.1	RA IMAGE LOC LIST	This template is used to sort location parameters by imaging location.
200	RA PERSONNEL LIST	This template sorts Radiology/Nuclear Medicine personnel by classification (e.g., technologist).

Print Templates:

File	Name	Description
70	RA DAILY LOG	This template is used to print a daily log of registered examinations.
70	RA OUTSIDE LIST	This template is used to generate the Delinquent Outside Film Report for outpatients.
71	RA ALPHA LIST OF ACTIVES	This template produces an alphabetic listing of all active Radiology/Nuclear Medicine procedures.
71	RA PROCEDURE BY AMIS	This template is used to generate the Short Active Procedure List.
71	RA PROCEDURE LIST	This template is used to generate the Long Procedure List.
71	RA PROCEDURE SHORT LIST	This template is used to generate the Inactive Short Procedure List.
72	RA STATUS PRINT	This template is used to generate the Examination Status List.
74	RA REPORT PRINT STATUS	This template is used to generate the Report's Print Status output. It is compiled into the RACTRT* routines.
74.1	RA STANDARD REPORTS LIST	This template is used in the Standard Reports Print option.
74.3	RA DISTRIBUTION	This template is used in the Report Distribution List.
74.4	RA ALL UNPRINTED REPORTS	This template is used to generate a list of reports in the distribution queue that have not been printed.
74.4	RA PRINTED REPORTS	This template is used in the List Reports in a Batch option.
74.4	RA UNPRINTED REPORTS	This template is used to generate reports in the distribution queue that have not yet been printed

78.2	**RA FLASH PRINT**	**This template is used to generate the Flash Card/Label List.**
78.3	**RA DIAGNOSTIC CODE PRINT**	**This template is used to print the Diagnostic Code List.**
78.4	**RA FILM SIZE**	**This template is used to provide information about types of film (e.g., inactivation date).**
79	**RA IMAGE DIV LIST**	**This template is used to generate a list of divisions.**
79.1	**RA EXAM ROOM LIST**	**This template is used to generate an exam room list.**
79.1	**IMAGE LOC LIST**	**This template is used to generate a list of imaging locations.**
79.2	**RA ACTIVITY LOG**	**This template is used to print the activity log from File #79.2.**
200	**RA PERSONNEL LIST**	**This template is used to generate a list of personnel who have a Radiology/Nuclear Medicine classification and their inactivation date, if applicable.**
200	**RA RESIDENT RADIOLOGIST**	**This template is used to generate a list of personnel who have a Radiology/Nuclear Medicine classification, their inactivation date and whether a staff review is required.**

Exported Options

This section lists the menus, options and protocols exported with this version.

IRM Menu (RA SITEMANAGER)
- **Device Specifications for Imaging Locations [RA DEVICE]**
- **Distribution Queue Purge [RA RPTDISTPURGE]**
- **Failsoft Parameters [RA FAILSOFT]**
- **Imaging Type Activity Log [RA IMGLOG]**
- **Purge Data Function [RA PURGE]**
- **Rebuild Distribution Queues [RA RPTDISTREBUILD]**
- **Template Compilation [RA COMPILE TEMPLATES]**

Rad/Nuc Med Total System Menu [RA OVERALL]
- **Exam Entry/Edit Menu [RA EXAMEDIT]**
  - **Add Exams to Last Visit [RA ADDEXAM]**
  - **Cancel an Exam [RA CANCEL]**
  - **Case No. Exam Edit [RA EDITCN]**
  - **Diagnostic Code Entry by Case No. [RA DIAGCN]**
  - **Edit Exam by Patient [RA EDITPT]**
  - **Enter Last Past Visit Before DHCP [RA PAST]**
  - **Exam Status Display [RA STATLOOK]**
  - **Indicate No Purging of an Exam/report [RA NOPURGE]**
  - **Register Patient for Exams [RA REG]**
  - **Status Tracking of Exams [RA STATRACK]**
  - **Switch Locations [RA LOC SWITCH]**
  - **View Exam by Case No. [RA VIEWCN]**
- **Films Reporting Menu [RA RPT]**
  - **Batch Reports Menu [RA BTCH]**
    - **Create a Batch [RA BTCHNEW]**
    - **Delete Printed Batches [RABTCHDEL]**
    - **List Reports in a Batch [RA BTCHLIST]**
    - **Print a Batch of Reports [RA BTCHPRINT]**
    - **Remove/Add Report From Batch [RA BTCHREMOVE]**
    - **Verify Batch [RA BTCHVERIFY] **LOCKED: RA VERIFY****
  - **Display a Rad/Nuc Med Report [RA RPTDISP]**
  - **Distribution Queue Menu [RA RPTDIST]**
    - **Activity Logs [RA RPTDISTACTIVITY]**
    - **Clinic Distribution List [RA RPTDISTLISTCLINIC]**
    - **Individual Ward [RA RPTDISTSINGLEWARD]**
    - **Print By Routing Queue [RA RPTDISTQUE]**
    - **Report's Print Status [RA RPTDISTPRINTSTATUS]**
    - **Single Clinic [RA RPTDISTSINGLECLINIC]**
    - **Unprinted Reports List [RA RPTDISTLISTUNPRINTED]**
    - **Ward Distribution List [RA RPTDISTLISTWARD]**
  - **Draft Report (Reprint) [RA REPRINT]**
  - **On-line Verifying of Reports [RA RPTONLINEVERIFY]**

****LOCKED: RA VERIFY****
Report Entry/Edit [RA RPTENTRY]
Resident On-Line Pre-Verification [RA RESIDENT PRE-VERIFY]
Select Report to Print by Patient [RA RPTPAT]
Switch Locations [RA LOC SWITCH]
Verify Report Only [RA RPTVERIFY] **LOCKED: RA VERIFY**
Management Reports Menu [RA MGTRPTS]
Daily Management Reports [RA DAILYRPTS]
Abnormal Exam Report [RA ABNORMAL]
Complication Report [RA COMPLICATION]
Daily Log Report [RA LOG]
Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]
Delinquent Status Report [RA DELINQUENT]
Examination Statistics [RA DAISTATS]
Incomplete Exam Report [RA INCOMPLETE]
Log of Scheduled Requests by Procedure [RA ORDERLOG]
Unverified Reports [RA DAIUVR]
Functional Area Workload Reports [RA LWKL]
Clinic Report [RA LWKLCLINIC]
PTF Bedsection Report [RA LWKLBEDSEC]
Service Report [RA LWKLSERVICE]
Sharing Agreement/Contract Report [RA LWKLSHARING]
Ward Report [RA LWKLWARD]
Personnel Workload Reports [RA WKL]
Physician Report [RA WKLPHY]
Resident Report [RA WKLRES]
Staff Report [RA WKLSTAFF]
Technologist Report [RA WKLTECH]
Transcription Report [RA TRANSRIP REPORT]
Special Reports [RA SPECRPTS]
AMIS Code Dump by Patient [RA AMISDUMP]
AMIS Report [RA AMIS]
Camera/Equip/Rm Report [RA WKLROOM]
Cost Distribution Report [RA CDR REPORT]
Detailed Procedure Report [RA WKLPROCEDURE]
Film Usage Report [RA FILMUSE]
Procedure/CPT Statistics Report [RA CPTSTATS]
Status Time Report [RA STATRPT]
Wasted Film Report [RA WASTED FILM RPT]
Outside Films Registry Menu [RA OUTSIDE]
Add Films to Registry [RA OUTADD]
Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]
Edit Registry [RA OUTEDIT]
Flag Film to Need 'OK' Before Return [RA OUTFLAG]
Outside Films Profile [RA OUTPROF]
Patient Profile Menu [RA PROFILES]
Detailed Request Display [RA ORDERDISPLAY]
Display Patient Demographics [RA PROFDEMOS]

Exam Profile (selected sort) [RA PROFSORT]
Outside Films Profile [RA OUTPROF]
Profile of Rad/Nuc Med Exams [RA PROFQUICK]
Radiology/Nuclear Med Order Entry Menu [RA ORDER]
Cancel a Request [RA ORDERCANCEL]
Detailed Request Display [RA ORDERDISPLAY]
Hold a Request [RAORDERHOLD]
Log of Scheduled Requests by Procedure [RA ORDERLOG]
Pending/Hold Rad/Nuc Med Request Log [RA ORDERPENDING]
Print Rad/Nuc Med Requests by Date [RA ORDERPRINTS]
Printed Selected Requests by Patient [RA ORDERPRINTPAT]
Request an Exam [RA ORDEREXAM]
Schedule a Request [RA ORDERSCHEDULE]
Ward/Clinic Scheduled Request Log [RAORDERLOGLOC]
Supervisor Menu [RA SUPERVISOR]
Delete a Report [RA DELETERPT] **LOCKED: RA MGR**
Delete Printed Batches By Date [RA BTCHDELDATE]
**** LOCKED: RA MGR****
Exam Deletion [RA DELETEXAM] **LOCKED: RA MGR**
Inquire to File Entries [DIINQUIRE]
List Exams with Inactive/Invalid Statuses [RA INVALID EXAM STATUSES}
Maintenance Files Print Menu [RA MAINTENANCEP]
Complication Type List [RA COMPRINT]
Diagnostic Code List [RA DIAGP]
Examination Status List [RA EXAMSTATUSP]
Film Sizes List [RA FILMP]
Flash Card/Label List [RA FLASHFORMP]
Major AMIS Code List [RA MAJORAMISP]
Modifier List [RA MODIFIERP]
Procedure File Listings [RA PROCLISTS]
Active Procedure List (Long) [RA PROCLONG]
Active Procedure List (Short) [RA PROCSHORT]
Alpha Listing of Active Procedures [RA ALPHALIST]
Inactive Procedure List (Long) [RA INACPRCLONG]
Invalid CPT/Stop Code List [RA INVALID CPT/STOP]
List of Inactive Procedures (Short) [RA INACPRCSHORT]
Procedure Message List [RA PROCMSGPRINT]
Series of Procedures List [RA PROCSERIES]
Report Distribution Lists [RA DISTP]
Sharing Agreement/Contract List [RA SHARINGP]
Standard Reports Print [RA STANDPRINT]
Mass Override Exam Status [RA EXAMSTATUS MASS OVERRIDE]
****LOCKED: RA MGR****
Override a Single Exam Status to 'complete' [RA OVERRIDE]
****LOCKED: RA MGR****
Print File Entries [DIPRINT]
Rad/Nuc Med Personnel Menu [RA PNL]

Classification Enter/Edit [RA PNLCLASS]
Clerical List [RA PNLCLERK]
Interpreting Resident List [RA PNLRES]
Interpreting Staff List [RA PNLSTAFF]
Technologist List [RA PNLTECH]
Search File Entries [DISEARCH]
System Definiton Menu [RA SYSDEF]
Camera/Equip/Rm Entry/Edit [RA SYSEXROOM]
Division Parameter Set-up [RA SYSDIV]
List of Cameras/Equip/Rms [RA SYSEXLIST]
Location Parameter List [RA SYSLOCLIST]
Location Parameter Set-up [RA SYSLOC]
Print Division Parameter List [RA SYSDIVLIST]
Unverify a Report [RA UNVERIFY] **LOCKED: RA MGR**
Update Exam Status [RA UPDATEXAM]
Utility Files Maintenance Menu [RA MAINTENANCE]
Complication Type Entry/Edit [RA COMPEDIT]
Diagnostic Code Enter/Edit [RA DIAGEDIT]
Examination Status Entry/Edit [RA EXAMSTATUS]
Film Type Entry/Edit [RA FILMEDIT]
Flash Card/Label Formatter [RA FLASHFORM]
Major AMIS Code Entry/Edit [RA MAJORAMIS]
Order Entry Procedure Display Menu [RA ORDERDISPLAY MENU]
Common Procedure Enter/Edit [RA COMMON PROCEDURE]
Create OE/RR Protocol from Common Procedure [RA CREATE OE/RR PROTOCOL]
Display Common Procedure List [RA DISPLAY COMMON PROCEDURES]
Procedure Enter/Edit [RA PROCEDURE]
Procedure Message Entry/Edit [RA PROCMSGEDIT]
Procedure Modifier Entry [RA MODIFIER]
Reason Edit [RA REASON EDIT]
Reports Distribution Edit [RA DISTEDIT]
Sharing Agreement/Contract Entry/Edit [RA SHARING]
Standard Reports Entry/Edit [RA STANDRPTS]
Valid Imaging Stop Codes Edit [RA VALID STOP CODES] **LOCKED: RA MGR**
Switch Locations [RA LOC SWITCH]
Update Patient Record [RA PTEDIT]
User Utility Menu [RA USERUTL]
Duplicate Flash Card [RA FLASH]
Jacket Labels [RA LABELS]
Print Worksheets [RA WORKSHEETS]
Switch Locations [RA LOC SWITCH]
Test Label Printer [RA LABELTEST]

Rad/Nuc Med Clerk Menu (RA CLERKMENU)
- **Add Exams to Last Visit [RA ADDEXAM]**
- **Cancel an Exam [RA CANCEL]**
- **Case No. Exam Edit [RA EDITCN]**
- **Display a Rad/Nuc Med Report [RA RPTDISP]**
- **Display Patient Demographics [RA PROFDEMOS]**
- **Duplicate Flash Card [RA FLASH]**
- **Exam Status Display [RA STATLOOK]**
- **Profile of Rad/Nuc Med Exams [RA PROFQUICK]**
- **Radiology/Nuclear Med Order Entry Menu [RA ORDER]**
  - **Cancel a Request [RA ORDERCANCEL]**
  - **Detailed Request Display [RA ORDERDISPLAY]**
  - **Hold a Request [RA ORDERHOLD]**
  - **Log of Scheduled Requests by Procedure [RA ORDERLOG]**
  - **Pending/Hold Rad/Nuc Med Request Log [RA ORDERPENDING]**
  - **Print Rad/Nuc Med Requests by Date [RA ORDERPRINTS]**
  - **Print Selected Requests by Patient [RA ORDERPRINTPAT]**
  - **Request an Exam [RA ORDEREXAM]**
  - **Schedule a Request [RA ORDERSCHEDULE]**
  - **Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]**
- **Register Patient for Exams [RA REG]**
- **Switch Locations [RA LOC SWITCH]**
- **View Exam by Case No. [RA VIEWCN]**

Rad/Nuc Med Ward Clerk Menu (RA WARD)
- **Cancel a Request [RA ORDERCANCEL]**
- **Detailed Request Display [RA ORDERDISPLAY]**
- **Display a Rad/Nuc Med Report [RA RPTDISP]**
- **Profile of Rad/Nuc Med Exams [RA PROFQUICK]**
- **Request an Exam [RA ORDEREXAM]**
- **Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]**

Rad/Nuc Med File Room Clerk Menu (RA FILERM)
- **Detailed Request Display [RA ORDERDISPLAY]**
- **Display a Rad/Nuc Med Report [RA RPTDISP]**
- **Display Patient Demographics [RA PROFDEMOS]**
- **Outside Films Registry Menu [RA OUTSIDE]**
  - **Add Films to Registry [RA OUTADD]**
  - **Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]**
  - **Edit Registry [RA OUTEDIT]**
  - **Flag Film To Need 'OK' Before Return [RA OUTFLAG]**
  - **Outside Films Profile [RA OUTPROF]**
- **Profile of Rad/Nuc Med Exams [RA PROFQUICK]**
- **User Utility Menu [RA USERUTL]**
  - **Duplicate Flash Card [RA FLASH]**
  - **Jacket Labels [RA LABELS]**
  - **Print Worksheets [RA WORKSHEETS]**

Switch Locations [RA LOC SWITCH]
Test Label Printer [RA LABELTEST]

Select Report to Print by Patient [RA RPTPAT]
View Exam by Case No. [RA VIEWCN]
Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]

Interpreting Physician Menu (RA RADIOLOGIST)
Detailed Request Display [RA ORDERDISPLAY]
Display a Rad/Nuc Med Report [RA RPTDISP]
Draft Report (Reprint) [RA REPRINT]
Indicate No Purging of an Exam/report [RA NOPURGE]
On-line Verifying of Reports [RA RPTONLINEVERIFY]
****LOCKED: RA VERIFY****
Print Selected Requests by Patient [RA ORDERPRINTPAT]
Profile of Rad/Nuc Med Exams [RA PROFQUICK]
Resident On-Line Pre-Verification [RA RESIDENT PRE-VERIFY]
Select Report to Print by Patient [RA RPTPAT]
Switch Locations [RA LOC SWITCH]
View Exam by Case No. [RA VIEWCN]

Reports Menu (RA REPORTS)
Abnormal Exam Report [RA ABNORMAL]
Complication Report [RA COMPLICATION]
Daily Log Report [RA LOG]
Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]
Delinquent Status Report [RA DELINQUENT]
Duplicate Flash Card [RA FLASH]
Film Usage Report [RA FILMUSE]
Functional Area Workload Reports [RA LWKL]
Clinic Report [RA LWKLCLINIC]
PTF Bedsection Report [RA LWKLBEDSEC]
Service Report [RA LWKLSERVICE]
Sharing Agreement/Contract Report [RA LWKLSHARING]
Ward Report [RA LWKLWARD]
Jacket Labels [RA LABELS]
Log of Scheduled Requests by Procedure [RA ORDERLOG]
Personnel Workload Reports [RA WKL]
Physician Report [RA WKLPHY]
Resident Report [RA WKLRES]
Staff Report [RA WKLSTAFF]
Technologist Report [RA WKLTECH]
Transcription Report [RA TRANSCRIP REPORT]
Print Worksheets [RA WORKSHEETS]
Status Time Report [RA STATRPT]
Test Label Printer [RA LABELTEST]

Rad/Nuc Med Secretary Menu (RA SECRETARY)
- **Display a Rad/Nuc Med Report [RA RPTDISP]**
- **Draft Report (Reprint) [RA REPRINT]**
- **Rad/Nuc Med Personnel Menu [RA PNL]**
  - **Classification Enter/Edit [RA PNLCLASS]**
  - **Clerical List [RA PNLCLERK]**
  - **Interpreting Resident List [RA PNLRES]**
  - **Interpreting Staff List [RA PNLSTAFF]**
  - **Technologist List [RA PNLTECH]**
- **Radiology/Nuclear Med Order Entry Menu [RA ORDER]**
  - **Cancel a Request [RA ORDERCANCEL]**
  - **Detailed Request Display [RA ORDERDISPLAY]**
  - **Hold a Request [RA ORDERHOLD]**
  - **Log of Scheduled Requests by Procedure [RA ORDERLOG]**
  - **Pending/Hold Rad/Nuc Med Request Log [RA ORDERPENDING]**
  - **Print Rad/Nuc Med Requests by Date [RA ORDERPRINTS]**
  - **Print Selected Requests by Patient [RA ORDERPRINTPAT]**
  - **Request an Exam [RA ORDEREXAM]**
  - **Schedule a Request [RA ORDERSCHEDULE]**
  - **Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]**
- **Report Entry/Edit [RA RPTENTRY]**
- **Select Report to Print by Patient [RA RPTPAT]**
- **Switch Locations [RA LOC SWITCH]**
- **Verify Batch [RA BTCHVERIFY] **LOCKED: RA VERIFY****
- **Verify Report Only [RA RPTVERIFY] **LOCKED: RA VERIFY****
- **View Exam by Case No. [RA VIEWCN]**

Rad/Nuc Med Technologist Menu (RA TECHMENU)
- **Add Exams to Last Visit [RA ADDEXAM]**
- **Cancel an Exam [RA CANCEL]**
- **Case No. Exam Edit [RA EDITCN]**
- **Display a Rad/Nuc Med Report [RA RPTDISP]**
- **Duplicate Flash Card [RA FLASH]**
- **Indicate No Purging of an Exam/report [RA NOPURGE]**
- **Log of Scheduled Requests by Procedure [RA ORDERLOG]**
- **Patient Profile Menu [RA PROFILES]**
  - **Detailed Request Display [RA ORDERDISPLAY]**
  - **Display Patient Demographics [RA PROFDEMOS]**
  - **Exam Profile (selected sort) [RA PROFSORT]**
  - **Outside Films Profile [RA OUTPROF]**
  - **Profile of Rad/Nuc Med Exams [RA PROFQUICK]**
- **Print Selected Requests by Patient [RA ORDERPRINTPAT]**
- **Register Patient for Exams [RA REG]**
- **Status Tracking of Exams [RA STATRACK]**
- **Switch Locations [RA LOC SWITCH]**
- **View Exam by Case No. [RA VIEWCN]**

Rad/Nuc Med Transcriptionist Menu (RA TRANSCRIPTIONIST)
- **Batch Reports Menu [RA BTCH]**
  - **Create a Batch [RA BTCHNEW]**
  - **Delete Printed Batches [RA BTCHDEL]**
  - **List Reports in a Batch [RA BTCHLIST]**
  - **Print a Batch of Reports [RA BTCHPRINT]**
  - **Remove/Add Report From Batch [RA BTCHREMOVE]**
  - **Verify Batch [RA BTCHVERIFY] **LOCKED: RA VERIFY****
- **Diagnostic Code Entry by Case No. [RA DIAGCN]**
- **Display a Rad/Nuc Med Report [RA RPTDISP]**
- **Draft Report (Reprint) [RA REPRINT]**
- **Report Entry/Edit [RA RPTENTRY]**
- **Select Report to Print by Patient [RA RPTPAT]**
- **Standard Reports Entry/Edit [RA STANDRPTS]**

Single options:

The following options do not appear on any menu:

Rad/Nuc Med [RA OERR EXAM]
Imaging Type Mismatch Report [RA EXAM/STATUS ITYPE MISMATCH]
Autopurge of Distribution Queues [RA RPTDISTAUTOPURGE]

Menu/Option asssignment:

The RA SITEMANAGER menu may be assigned to the IRM staff member who supports this package. Descriptions of the RA SITEMANAGER options are in the Implementation and Maintenance section of this manual.

The RA OVERALL menu is the most extensive menu and may be assigned to the ADPAC.

All other menu and option assignments should be decided upon by the ADPAC. Descriptions of non-RA SITEMANAGER options may be found in the ADPAC Guide or User Manual.

Protocols:

The following protocols are exported with this version:

RA CANCEL
RA EVSEND OR
RA OERR DEFAULT PROTOCOL
RA OERR EXAM
RA OERR PROFILE

RA ORDERABLE ITEM UPDATE
RA RECEIVE
RA REG
RA RPT
RA SEND

FileMan Options:

Three FileMan namespaced options are exported with this software to allow users to inquire, print or search Radiology/Nuclear Medicine package files. They are:

DIINQUIRE
DIPRINT
DISEARCH

Cross References

File#,Field#	Field Name	X-Ref	Description
34,.01	Agreement Name	B	Regular B cross-reference used for look-ups.
70,.01	Name	B	Regular B cross-reference used for look-ups.
70.02,.01	Exam Date	AR	Used to generate most workload reports.
70.03,.01	Case Number	ABLTN	The delete logic of this MUMPS cross-reference invokes the RABUL1 routine which sends a bulletin to a mail group when an exam is deleted.
		ADC	This MUMPS cross-reference is used to look up an exam by mmddyy - case number.
70.03,2	Procedure	AP	Used to screen duplicate entries.
70.03,3	Exam Status	AS	This MUMPS cross-reference is used to produce a list of active and incomplete exams.
		C	This MUMPS cross-reference is used to look-up exams that are active or incomplete.
70.03,11	Imaging Order	AO	Used to link a request to an exam.
70.03,12	Primary Interpreting Resident	ARES	This MUMPS cross-reference sets a cross-reference on the Rad/Nuc Med Reports file (#74). It is used during the On-line Verifying of Reports option to determine the reports a specific interpreting resident needs to verify.

70.03,13	**Primary Diagnostic Code**	**AD**	**This MUMPS cross-reference is set when the Diagnostic Print Date field is null and the Print on Exceptions List field (#3) of File (#78.3) is set to "Y". Used to produce the Abnormal Exam Report.**
70.14,.01	**Secondary Diagnostic Code**	**AD**	**This MUMPS cross-reference is set when the Secondary Dx Print Date field is null and the Print on Exceptions List field (#3) of File #78.3 is set to "Y". Used to produce the Abnormal Exam Report.**
70.03,15	**Primary Interpreting Staff**	**ASTF**	**This MUMPS cross-reference sets a cross-reference on the Rad/Nuc Med file (#74). It is used during the On-line Verifying of Report option to determine the reports a specific interpreting staff physician needs to verify.**
70.03,16	**Complication**	**ACM**	**This is a MUMPS cross-reference. If a complication is entered that indicates a reaction to contrast media, a contrast media allergy record is entered in the Adverse Reaction Tracking package (formerly Gen. Med. Rec.-Allergies).**
70.03,45	**Prevent Purge**	**AC**	**This cross-reference sets the "NOPURGE" node in File #74 to indicate whether a report should be purged.**
70.11,.01	**Secondary Interpreting Staff**	**ASTF**	**This MUMPS cross-reference sets a cross-reference on the Rad/Nuc Med file (#74). It is used during the On-line Verifying of Reports option to determine the reports a specific interpreting staff physician needs to verify.**

70.09,.01	**Secondary Interpret'g Resident**	**ARES**	**This MUMPS cross-reference sets a cross-reference on the Rad/Nuc Med file (#74). It is used during the On-line Verifying of Reports option to determine the reports a specific interpreting resident needs to verify.**
71,.01	**Name**	**B**	**Regular B cross-reference used for look-ups.**
		C	**This MUMPS cross-reference allows users to look-up procedures using lowercase characters.**
71,9	**CPT Code**	**D**	**This regular look-up cross-reference is used to look up procedures by CPT code.**
71,12	**Type of Imaging**	**AIMG**	**This cross-reference is used to identify procedures with an imaging type.**
71.01,.01	**Synonym**	**E**	**This regular cross-reference is used to look-up procedures by their synonym which should speed up user input and processing.**
		F	**This MUMPS cross-reference is used to look-up procedures by their synonym using lower case characters.**
71.03,.01	**AMIS Code**	**AC**	**This cross-reference is used to determine the AMIS codes associated with a procedure. It is used primarily when analyzing contrast media reactions.**
71.05,.01	**Descendents**	**ADESC**	**This cross-reference is used to find a descendent's parent procedure.**
71.1	**Description**	**B**	**Regular B cross-reference used for look-ups.**

71.2	**Name**	**B**	**Regular B cross-reference used for look-ups.**
71.23,.01	**Type of Imaging**	**AB**	**This cross-reference is used to identify the imaging types associated with a procedure modifier.**
71.3,.01	**Procedure**	**B**	**Regular B cross-reference used for look-ups.**
		AD	**This MUMPS cross-reference is used to find common procedures by their procedure name.**
		AE	**This MUMPS cross-reference updates the AA cross-reference when the procedure changes.**
71.3,2	***Common Procedure Group**	**AC**	**This MUMPS cross-reference is used to group procedures by type.**
71.3,3	**Sequence Number**	**AA**	**This MUMPS cross-reference is used for the generation of the common procedure list. Only active procedures are in the AA cross-reference.**
71.3,4	**Inactive**	**trigger**	**This trigger cross-reference deletes the AA cross-reference when the Inactive field is set to "Y".**
71.4,.01	**Text**	**B**	**Regular B cross-reference used for look-ups.**
71.5,.01	**Valid Code**	**B**	**Regular B cross-reference used for look-ups.**
72,.01	**Status**	**B**	**Regular B cross-reference used for look-ups.**
72,3	**Order**	**AA1**	**This MUMPS cross-reference sets the AA cross-reference. It links the imaging type with the status progression.**

72,7	**Type of Imaging**	**AA2**	**This MUMPS cross-reference sets the AA cross-reference. It links the imaging type with the status progression.**
74,.01	**Day/Case #**	**B**	**Regular B cross-reference used for look-ups.**
		ABLTN	**The delete logic of this MUMPS cross-reference invokes the RABUL3 routine which sends a bulletin to a mail group when a report is deleted.**
74,2	**Patient Name**	**C**	**This regular cross-reference is used to look-up reports by patient.**
74,5	**Report Status**	**ABLTN1**	**The delete logic of this MUMPS cross-reference invokes the RABUL2 routine which sends a bulletin to a mail group when a report is unverified.**
		ARES	**This MUMPS cross-reference is used during the On-line Verifying of Reports option to determine the reports a specific interpreting resident needs to verify.**
		ASTF	**This MUMPS cross-reference is used during the On-line Verifying of Reports option to determine the reports a specific interpreting staff physician needs to verify.**
		ASTAT	**This MUMPS cross-reference is used to track the status of non-verified reports for generation of the Unverified Reports report.**
74,7	**Verified Date**	**AA**	**This MUMPS cross-reference is used by the Rebuild Distribution Queue option.**

74,11	Transcriptionist	AD	This MUMPS cross-reference is used to identify the user who transcribed the report and the date/time the report was entered.
74.1,.01	Standard Report	B	Regular B cross-reference used for look-ups.
74.2,.01	Batch Name	B	Regular B cross-reference used for look-ups.
74.2,3	User Who Created Batch	C	This regular cross-reference is used to look-up batches by the user who created those batches.
74.2,4	Date/Time Batch Was Printed	E	This regular cross-reference is used for look-ups and to make the Delete Printed Batches by Date option run efficiently.
74.21,.01	Report	D	This regular cross-reference is used to look-up batches by individual reports within a batch.
74.3,.01	Name	B	Regular B cross-reference used for look-ups.
74.4,.01	Report	B	Regular B cross-reference used for look-ups.
74.4,4	Print Date/Time	AD	This cross-reference is used to generate a list of reports by the date printed.
74.4,11	Distribution Queue	C	This regular cross-reference is used to look-up batches by distribution queue.
75.1,.01	Name	B	Regular B cross-reference used for look-ups.
		trigger	This trigger cross-reference fills in the User Entering Request field (#15) using the user's sign-on information.

		trigger	This trigger cross-reference fills in the Request Entered Date/Time field (#16) to track the date and time the request was entered.
75.1,2	Procedure	AP	This MUMPS cross-reference is set if the Date Desired (Not guaranteed) field (#21) has a value. It is used to screen duplicate requests at the time the request is entered.
75.1,5	Request Status	AS	This MUMPS cross-reference is used to list requests by status.
75.1,18	Last Activity Date/Time	AO	Used to generate a list of requests by the date and time the last action was taken on the request.
75.1,21	Date Desired (Not guaranteed)	AC	This MUMPS cross-reference sets the AP cross-reference. It is used to screen duplicate requests at the time the request is entered.
75.1,23	Scheduled Date (Time optional)	AD	This MUMPS cross-reference is used to print the log of scheduled requests.
75.2,.01	Reason	B	Regular B cross-reference used for look-ups.
75.2,3	Synonym	S	This regular cross-reference is used to look-up reasons by their synonym.
78.1,.01	Complication	B	Regular B cross-reference used for look-ups.
78.2,.01	Format Name	B	Regular B cross-reference used for look-ups.
78.3,.01	Diagnostic Code	B	Regular B cross-reference used for look-ups.
78.4,.01	Film	B	Regular B cross-reference used for look-ups.

78.4,5	**Wasted Film?**	**AW**	**This cross-reference is used to quickly identify wasted film.**
		trigger	**This trigger cross-reference is used to delete the value in the Analogous Unwasted Film Size field (#6) when the value of this field is deleted.**
78.4,6	**Analagous Unwasted Film Size**	**AUW**	**This cross-reference is used as a screen in the input transform of the Wasted Film? field (#5).**
78.6,.01	**Camera/Equip/Rm**	**B**	**Regular B cross-reference used for look-ups.**
78.6,2	**Description**	**C**	**This regular cross-reference is used to look-up camera/ equipment/rooms by description.**
78.7,.01	**Print Field**	**B**	**Regular B cross-reference used for look-ups.**
78.7,2	**Type of Data**	**AC**	**This cross-reference is used to generate a list of label print fields grouped by the type of data stored in the field.**
78.7,5	**Internal Variable**	**C**	**This regular cross-reference is used to look-up label print fields by the local variable name associated with this label print field (e.g., RASEX).**
79,.01	**Division**	**B**	**Regular B cross-reference used for look-ups.**
79,.17	**Detailed Procedure Required**	**AC**	**This MUMPS cross-reference updates a mirror image parameter field in the OE/RR package. OE/RR stores this parameter in order to determine whether to allow 'Broad' type procedures to be ordered at a given division.**

79,.121	**Ask 'Imaging Location'**	**AC1**	**This MUMPS cross-reference updates a mirror image parameter field in the OE/RR package. OE/RR stores this parameter in order to determine if the 'Submit Request To' question was asked for a particular division in the Rad/Nuc Med software.**
79.01,.01	**Imaging Location**	**AL**	**This cross-reference is used to generate a list of imaging locations associated with a Radiology/Nuclear Medicine Division.**
		trigger	**This trigger cross-reference enters data into Division field (#25) of File #79.1.**
79.1,.01	**Location**	**B**	**Regular B cross-reference used for look-ups.**
79.1,6	**Type of Imaging**	**BIMG**	**This cross-reference is used to determine if a given imaging type is assigned to one or more locations.**
79.11,.01	**Input Devices**	**AD**	**This cross-reference is used to list input devices associated with an imaging location.**
79.2,.01	**Type of Imaging**	**B**	**Regular B cross-reference used for look-ups.**
		AA	**This MUMPS cross-reference sets the AA cross-reference in File #72 when the Imaging Type is changed.**
79.2,3	**Abbreviation**	**C**	**This regular cross-reference is used to look-up an imaging location using an abbreviation. This should make look-ups easier and quicker for the user.**

79.2,4	**Operating Conditions**	**AC**	**This cross-reference is used to get the current operating condition (Normal or Emergency) for an imaging location.**
200.072	**Rad/Nuc Med Classification**	**ARC**	**This MUMPS cross-reference is used to determine if a person has a Radiology/Nuclear Medicine personnel classification (i.e., Technologist, Resident, Staff or Clerk).**

File Diagram

File #/Name		Points to		Is Pointed to by	
34	Contract/Sharing Agreements		none	70	Rad/Nuc Med Patient
				75.1	Rad/Nuc Med Orders
70	Rad/Nuc Med Patient	2	Patient		none
		34	Contract/Sharing Agreements		
		42	Ward Location		
		42.4	Specialty		
		44	Hospital Location		
		49	Service/Section		
		71	Rad/Nuc Med Procedures		
		71.2	Procedure Modifiers		
		72	Examination Status		
		74	Rad/Nuc Med Reports		
		75.1	Rad/Nuc Med Orders		
		75.2	Rad/Nuc Med Reasons		
		78.1	Complication Types		
		78.3	Diagnostic Codes		
		78.4	Film Sizes		
		78.6	Camera/Equip/Rm		
		79	Rad/Nuc Med Division		
		79.1	Imaging Locations		
		79.2	Imaging Type		
		200	New Person		

71	Rad/Nuc Med Procedures	40.7	Clinic Stop	70	Rad/Nuc Med Patients
		71	Rad/Nuc Med Procedures	71.3	Rad/Nuc Med Common Procedures
		71.1	Major Rad/Nuc Med AMIS Codes	75.1	Rad/Nuc Med Orders
		71.4	Rad/Nuc Med Procedure Message	100.1	Order Statistics
		78.2	Flash Card Formats	101	Protocol
		78.4	Film Sizes	142	Health Summary Type
		79.2	Imaging Types		
		81	CPT		
		142	Health Summary Type		
71.1	Major Rad/Nuc Med AMIS Codes	40.7	Clinic Stop	71	Rad/Nuc Med Procedures
71.2	Procedure Modifiers	79.2	Imaging Type	70	Rad/Nuc Med Patient
				71.3	Rad/Nuc Med Common Procedure
				75.1	Rad/Nuc Med Orders
71.3	Rad/Nuc Med Common Procedure	71	Rad/Nuc Med Procedures		none
		71.2	Procedure Modifiers		
		79.1	Imaging Locations		
71.4	Rad/Nuc Med Procedure Message		none	71	Rad/Nuc Med Procedures
71.5	Rad/Nuc Med Orders	40.7	Clinic Stop		none
72	Examination Status	19.1	Security Key	70	Rad/Nuc Med Patient
		72	Examination Status		
		79.2	Imaging Type		

74	Rad/Nuc Med Reports	2 200 2005	Patient New Person Image	70 74.2 74.4 2005	Rad/Nuc Med Patient Report Batches Report Distribution Image
74.1	Standard Reports		none		none
74.2	Report Batches	74 200	Rad/Nuc Med Reports New Person		none
74.3	Report Distribution Queue	200	New Person	74.4	Report Distribution
74.4	Report Distribution	2 42 44 74 74.3 79 79.1 200	Patient Ward Location Hospital Location Rad/Nuc Med Reports Report Distribution Queue Rad/Nuc Med Division Imaging Locations New Person		none
75.1	Rad/Nuc Med Orders	2 34 44 71 71.2 75.2 79.1 79.2 100 200	Patient Contract/Sharing Agreements Hospital Location Rad/Nuc Med Procedures Procedure Modifiers Rad/Nuc Med Reason Imaging Locations Imaging Type Order New Person	70 100	Rad/Nuc Med Patient Order

75.2	Rad/Nuc Med Reason		none	70 75.1	Rad/Nuc Med Patient Rad/Nuc Med Orders
78.1	Complication Types		none	70	Rad/Nuc Med Patient
78.2	Flash Card Formats	78.7	Label Print Fields	71 79.1	Rad/Nuc Med Procedures Imaging Locations
78.3	Diagnostic Codes		none	70	Rad/Nuc Med Patient
78.4	Film Sizes	78.4	Film Sizes	70 71	Rad/Nuc Med Patient Rad/Nuc Med Procedures
78.6	Camera/Equip/Rm		none	70 79.1	Rad/Nuc Med Patient Imaging Locations
78.7	Label Print Fields		none	78.2	Flash Card Formats
79	Rad/Nuc Med Division	4 79.1	Institution Imaging Locations	70 74.4	Rad/Nuc Med Patient Report Distribution

79.1	**Imaging Locations**	**44**	**Hospital Location**	**70**	**Rad/Nuc Med Patient**
		78.2	**Flash Card Formats**	**71.3**	**Rad/Nuc Med Common Procedure**
		78.6	**Camera/Equip/Rm**	**74.4**	**Report Distribution**
		79	**Rad/Nuc Med Division**	**75.1**	**Rad/Nuc Med Orders**
		79.2	**Imaging Type**	**200**	**New Person**
79.2	**Imaging Type**	**200**	**New Person**	**70**	**Rad/Nuc Med Patient**
				71	**Rad/Nuc Med Procedures**
				71.2	**Procedure Modifiers**
				72	**Examination Status**
				75.1	**Rad/Nuc Med Orders**
				79.1	**Imaging Locations**
200	**New Person**	**79.1**	**Imaging Locations**	**70**	**Rad/Nuc Med Patient**
				74	**Rad/Nuc Med Reports**
				74.2	**Report Batches**
				74.3	**Report Distribution Queue**
				74.4	**Report Distribution**
				75.1	**Rad/Nuc Med Orders**
				79.2	**Imaging Type**

Archiving and Purging

This version of the Radiology/Nuclear Medicine package does not provide for the archiving of its data.

The Purge Data Function [RA PURGE] option is fully discussed in the Implementation and Maintenance section of this manual.

RAO7PC1: Procedure Call Utility for OE/RR package (V. 3.0)

Entry Point	Description
EN1()	**This entry point returns a global array containing a list of the non-cancelled exams for a specified patient and time period.** **Input: Parameter list (var1,var2,var3,var4)** **var1 = patient IEN (Required)** **var2 = beginning date of search in FileMan format (Required)** **var3 = ending date of search in FileMan format (Required)** **var4 = maximum number of exams to return (Optional)** **Output:** **^TMP($J,"RAE1",sub1,sub2)=piece1^piece2^piece3^piece4** **sub1 = patient IEN** **sub2 = exam date/time in inverse format concatenated with the case IEN (e.g., 7049898.9184-1)** **piece1 = procedure name (e.g., CHEST SINGLE VIEW)** **piece2 = case number (e.g., 33)** **piece3 = report status (i.e., Verified, Released/Not Verified, Draft, Problem Draft or No Report).** **piece4 = abnormal flag (i.e., null or "Y" for yes)**

EN2() **This entry point returns a global array containing a list of the exams of the previous seven days for a specified patient.**

Input: Parameter list (var1)

var1 = patient IEN (Required)

Output:

^TMP($J,"RAE7",sub1,sub2)=piece1^piece2^piece3^piece4^piece5 ^piece6

sub1 = patient IEN
sub2 = exam date/time in inverse format concatenated with the case IEN (e.g., 7049898.9184-1)
piece1 = procedure name (e.g., CHEST SINGLE VIEW)
piece2 = case number (e.g., 44)
piece3 = report status (i.e., Verified, Released/Not Verified, Draft, Problem Draft or No Report).
piece4 = imaging location IEN in File #44
piece5 = imaging location name (e.g., X-RAY)
piece6 = "m"edia or "b"arium or "c"holecystogram

EN3() **This entry point returns a global array of the narrative text for an exam for a specified patient and exam.**

Input: Parameter list (var1)

var1 = patient IEN^inverse exam date (e.g., 6561^7049868.9067) When no internal case number is used then all reports for a set of exams ordered on one order will be retrieved.

or

var1 = patient IEN^inverse exam date^internal case number (e.g., 6561^7049868.9067^1) When an internal case number is used a single report for a single exam will be retrieved.

(Required)

Output:

^TMP($J,"RAE2",Patient IEN,procedure name,case IEN) =report status^abnormal flag

^TMP($J,"RAE2",Patient IEN,procedure name,case IEN,"D",n) = diagnostic code (for n=1, this is the primary code)

^TMP($J,"RAE2",Patient IEN,procedure name,case IEN,"I",n) = impression (a line of text)

^TMP($J,"RAE2",Patient IEN,procedure name,case IEN,"R",n) = report (a line of text)

^TMP($J,"RAE2",Patient IEN,procedure name,case IEN,"V",n) = verifier IEN^signature block name

EN4() **This entry point returns an array of imaging locations for the imaging type specified.**

Input: Parameter list (var1,var2)

var1 = abbreviation for an Imaging Type (e.g., RAD) (Required)
var2 = array name (e.g., LOCATION) (Required)

Output:

array name(location IEN) = File #44 IEN^File #44 name ^division IEN^division name
e.g., LOCATION(1) = 47^X-RAY ^499^HINES ISC

RAUTL3: AMIE and Adverse Reaction Tracking (formerly Gen. Med. Rec.-Allergies) calls

Entry Point	Description
EN1	This entry point prints Radiology/Nuclear Medicine reports for the AMIE package. Input: DFN = patient IEN (Required) RABDT = Beginning date of search in FileMan format. Time is optional. (Required) RAEDT = Ending date of search in FileMan format. Time is optional. (Required) RAHLOC = A string of IENs for locations. Each location must be separated by an "^" and RAHLOC must begin and end with a "^" (e.g., "^56^75^"). These are requesting locations, not imaging locations. (Required) Output: A Radiology/Nuclear Medicine report.
ALLERGY()	This entry point is being phased out. It consists of a Quit command only. It is needed by the Adverse Reaction Tracking package (formerly Gen. Med. Rec.-Allergies) to support backward compatability. Input: Parameter list (var1,var2) var1 = patient IEN (Required) var2 = "Y"es or "N"o (Required) Output: none

External Relations

The Radiology/Nuclear Medicine package relies on the following external packages to run effectively:

Package	Minimum Version Needed
Kernel	**8.0**
VA FileMan	**21.0**
MailMan	**7.1**
PIMS	**5.3**
Health Level Seven	**1.5**
Adverse Reaction Tracking (ART) formerly Gen. Med. Rec.-Allergies	**3.0 (patched through GMRA*3*13)**
OE/RR	**2.5**

The following external files are expected to be present, with data:

CPT (#81)
CPT Categories (#81.1)
Hospital Location (#44)
Medical Center Division (#40.8)
New Person (#200)
Patient (#2)
Ward Location (#42)

Also, the Electronic Signature fields in the New Person file (#200) are used by this package to verify and print reports.

DBIAs:

The Radiology/Nuclear Medicine package has database integration agreements with other DHCP packages. The DBIAs that exist at the time this version is released are listed below. These agreements can be viewed under the DBA menu on FORUM.

Name	Package	Description
Contrast Media Allergy	**Adverse Reaction Tracking (formerly Gen. Med. Rec. - Allergies)**	**The GMRARAD routine is used to handle contrast media allergy data for patients.**
DBIA349	**Health Summary**	**The GMTSDVR routine is used to print a health summary.**

ORX2	**OE/RR**	**The ORX2 routine is used to lock/unlock an order.**
ORX3	**OE/RR**	**The ORX3 routine is used to create a notification.**
ORX5	**OE/RR**	**The ORX5 routine is used to place an order in a 'Hold' status.**
ORX7	**OE/RR**	**The ORX7 routine is used to place an order in a 'Discontinued' status.**
ORX8	**OE/RR**	**The ORX8 routine is used to get data from the Order file (#100).**
File 101	**OE/RR**	**To maintain protocols in Protocol file (#101).**
File 101.98	**OE/RR**	**Determine an appropriate Display Group from the Display Group file (#100.98) for an order.**
File 100.99	**OE/RR**	**Uses Order Parameters file (#100.99) to determine if the OE/RR package is installed and to set up entries in the package parameters portion of this file.**
File 100.01	**OE/RR**	**Allows Radiology/Nuclear Medicine to point to Order Status file (#100.01).**
DBIA332	**Pharmacy**	**Allows Radiology/Nuclear Medicine to use the Inactive Date field (#53.4) of the New Person file (#200).**
DBIA115-A	**Record Tracking**	**Allows the use of the Record Tracking System Parameter file (#195.4).**
DBIA115-B	**Record Tracking**	**The RTPSET routine is used to make certain the Radiology/Nuclear Medicine application portion of Record Tracking is set.**
DBIA115-C	**Record Tracking**	**The RTREG1 routine is used to get records when registering a patient request.**

DBIA115-D	**Record Tracking**	**The RTRD routine is used for paging assistance when displaying exam profiles.**
DBIA19	**Scheduling**	**Allows Radiology/Nuclear Medicine to look at Clinic Stop file (#40.7).**
DBIA179	**Scheduling**	**The SDACS routine is used for adding stop codes.**
DBIA1324-A	**Imaging**	**Documents reference to an Imaging package global.**
DBIA1324-B	**Imaging**	**Documents reference to an Imaging package global.**
DBIA1324-C	**Imaging**	**Documents reference to an Imaging package routine.**
DBIA1324-E	**Imaging**	**Documents reference to an Imaging package routine.**
DBIA1332	**Kernel**	**Documents File #200 fields created by the Radiology/Nuclear Medicine package.**
DBIA1335	**Scheduling**	**Documents references to the Hospital Location file (#44).**
DBIA1337	**Registration**	**Documents references to the Specialty file (#42.4).**
DBIA1338	**Imaging**	**Documents the killing of Imaging package temporary globals.**
DBIA1339	**Health Level Seven**	**Documents references to File #772.**
DBIA1340	**Kernel**	**Allows sites to create their own keys.**
DBIA1353	**VA FileMan**	**Allows a look-up on FileMan's Input Template file (#.402).**
DBIA1355	**VA FileMan**	**Allows a look-up on FileMan's Print Template file (#.4).**
DBIA1361-A	**OE/RR**	**Documents first-time population of the OE/RR v3.0 orderable items file.**

DBIA1361-B	**OE/RR**	**Allows a call to an OE/RR v3.0 notification processing routine.**

Internal Relations

All options in the Radiology/Nuclear Medicine V. 4.5 package can function independently. Most options require the use of the following package-wide variables: RACCESS, RAMDV, RAMLC, RAMDIV and RAIMGTY. Descriptions of these variables can be found in the Package-wide Variables section and the Key Variables portion of the Introduction of this manual. If they do not already exist, these variables are set at the time the option is invoked. They are only killed by the exit action of the user's main Radiology/Nuclear Medicine menu (e.g., Rad/Nuc Med Transcriptionist Menu). If other options are invoked independently, these variables should be killed by adding 'D KILL^RAPSET1' to the exit action of the option.

SACC Exemptions:

The Standards and Conventions Committee approved an exemption for this package to have routines greater than 5000 bytes in size (September 1995).

Package-wide Variables

Name	Description
RACCESS	**This array identifies the user's division, imaging location and imaging type access.**
RAIMGTY	**This is the name of imaging type (File #79.2 entry) of the user based on the imaging location selected.**
RAMDIV	**The internal entry number of the division (File #79) the user has signed-on to.**
RAMDV	**The division parameters for a File #79 entry. The parameters that make up this variable are identified in the Key Variables portion of the Introduction Section of this manual.**
RAMLC	**The imaging location parameters for a File #79.1 entry. The parameters that make up this variable are identified in the Key Variables portion of the Introduction Section of this manual.**

These variables are created or changed when the user selects a sign-on imaging location usually during the login process or in the Switch Locations option. The variables are also set by the individual options if they do not already exist. The routine series RAPSET* sets these variables.

Example of when the package-wide variables are created or changed:

```
Please select a sign-on Imaging Location: X-RAY// <RET>          (GENERAL
RADIOLOGY)

---------------------------------------------------------------------------
Welcome, you are signed on with the following parameters:

                                  Printer Defaults
 Version  : 4.5                   ----------------
 Division : HINES                 Flash Card  : RAD/NM FLASH CARDS
 Location : X-RAY                               1 card/exam
 Img. Type: GENERAL RADIOLOGY     Jacket Label: RAD/NM JACKET LBLS
 User     : METER,MILLIE                        1 labels/visit
                                  Report      : RAD/NM REPORT PTR
---------------------------------------------------------------------------
```

These variables are killed when the user exits the package menu they logged in under. The variables are killed by calling KILL^RAPSET1.

How to Generate On-line Documentation

This section describes various methods by which users may generate Radiology/ Nuclear Medicine technical documentation.

Question Marks

Entering question marks at the "Select ... Option:" prompt provide users with valuable technical information. For example, a single question mark (?) lists all options which can be accessed from the current option. Entering two question marks (??) lists all options accessible from the current one, showing the formal name and lock (if applicable) for each. Three question marks (???) displays a brief description for each option in a menu while an option name preceded by a question mark (?OPTION) shows extended help, if available, for the option.

%INDEX

This utility analyzes routines to determine if they adhere to DHCP Programming Standards. The %INDEX output may include the following components: Compiled list of Errors and Warnings, Routine Listing, Local Variables, Global Variables, Naked Global References, Label References and External References.

To run %INDEX for the Radiology/Nuclear Medicine package, specifiy the following namespace at the "routine(s) ?>" prompt: RA*.

RACT* routines are compiled template routines, which you may not wish to examine (i.e., -RACT*).

Inquire to File Entries

This option provides the following information about a specified option: option name, menu text, option description, type of option. All fields that have a value will be displayed (e.g., Entry Action).

To secure information about the Radiology/Nuclear Medicine options, the user must specify the name of the options desired (File #19). The options exported with this package begin with the letters RA.

Print Options File

Use this option to generate ad hoc reports about options from the Option file (#19). The user may choose one, many or all Radiology/Nuclear Medicine options. The options exported with this package begin with the letters RA.

List File Attributes

This option allows the user to generate documentation pertaining to files and file structure. The Radiology/Nuclear Medicine file numbers are 34 and 70-79.2. See the File List section of this manual for a specific listing.

Select the 'Standard' format to get the following data dictionary information for a specified file: file name and description, identifiers, cross-references, files pointed to by the file specified, files which point to the file specified, input templates, print templates and sort templates. In addition, the following applicable data is supplied for each field in the file: field name, number, title, global location, description, help prompt, cross-references, input transform, and date last edited.

Select the 'Global Map' format to generate an output which lists all cross-references for the file selected, global location of each field in the file, input templates, print templates and sort templates.

For a more exhaustive option listing and further information about other utilities which supply on-line technical information, please consult the DHCP Kernel Systems Manual.

Glossary

AMIS code	**For imaging, one of 27 codes used to categorize procedures, determine which procedures use contrast media, calculate workload crediting and weighted work units. AMIS codes are determined by VA Central Office and should not be changed at the medical centers.**
AMIS weight multiplier	**A number associated with a procedure-AMIS code pair that is multiplied by the AMIS code weighted work units. If the multiplier is greater than 1, a single exam receives multiple exam credits.**
Active	**An order status that occurs when a request to perform a procedure on a patient has been registered as an exam, but before it has reached a status of 'COMPLETE'.**
Activity log	**A log of dates and times data was entered and/or changed. The Radiology/Nuclear Medicine system is capable of maintaining activity logs for reports, exam status changes, imaging type parameter changes, purge dates, outside film registry activity, and order status changes.**
Alert	**Refer to Kernel and OE/RR documentation.**
Attending physician	**The Radiology/Nuclear Medicine software obtains this data from the MAS package, which is responsible for its entry and validity. Refer to the DHCP MAS package documentation for more information and a description of the meaning of this term as it applies to DHCP.**
Batch	**In the Radiology/Nuclear Medicine system, a batch is a set of results reports. Transcriptionists may create batches to keep similar reports together and cause them to print together. One possible purpose might be to print all reports dictated by the same physician together.**
Bedsection	**See PTF Bedsection.**

Bilateral	**A special type of modifier that can be associated with an exam, a procedure, or an AMIS code. When an exam is bilateral due to one of the aforementioned associations, workload credit and exam counts are doubled for that exam on most workload and AMIS reports.**
Broad procedure	**A non-specific procedure that is useful for ordering when the ordering party is not familiar enough with imaging procedures to be able to specify the exact procedure that is to be performed. Before an exam status can progress to 'COMPLETE', the imaging service must determine a more specific procedure and change the exam procedure to reflect the actual 'detailed' or 'series' procedure done. Depending on site parameters, broad procedures may or may not be used at a given facility. Also see Detailed and Series procedure.**
Bulletin	**A special type of mail message that is computer-generated and sent to a designated user or members of a mail group. Bulletins are usually created to inform someone of an event triggered by another user's data entry, or exam and request updates that require some action on the part of the bulletin recipient.**
CPT code	**See Current Procedural Terminology**
Camera/Equipment/Room	**The specific room or piece of equipment used for a patient's imaging exam. Each is associated with one or more imaging locations. The Radiology/Nuclear Medicine system supports, but does not require users to record the camera/equipment/room used for each exam.**
Cancelled	**A status that can be associated with an exam. Also see Discontinued.**

Case number	**A computer-generated number assigned to the record generated when one patient is registered for one procedure at a given date/time. Note that when multiple procedures are registered for a patient at the same date/time, each procedure will be given a different case number. Case numbers will be recycled and reused by a new patient/procedure/date instance when the exam attains a 'COMPLETE' status.**
Category of exam	**For the purposes of this system, category of exam must be Outpatient, Inpatient, Contract, Sharing, Employee, or Research. Several workload and statistical reports print exam counts by category. Others use the category to determine whether exams should be included on the report.**
Clinic	**Hospital locations where outpatients are cared for. In DHCP, clinics are represented by entries in the Hospital Location file (#44). Radiology/Nuclear Medicine Imaging Locations, represented by entries in the Imaging Location file (#79.1), are a subset of the Hospital Location file.**
Clinical history	**Data entered in the Radiology/Nuclear Medicine system during exam ordering and exam edit. Usually entered by the requesting party to inform the imaging service why the exam needs to be done and what they hope to find out by doing the exam.**
Clinical history message	**Text that, if entered in system parameter setup, will always display when the user is prompted for clinical history. Generally used to instruct the user on what they should enter for clinical history.**
Common procedure	**A frequently ordered procedure that will appear on the order screen. Up to 40 per imaging type are allowed by the system. Other active Rad/Nuc Med procedures are selectable for ordering, but only the ones designated as common procedures and given a display sequence number will be displayed prior to selection.**

Complete	**A status that can be attained by an order or an exam.**
Complication	**A problem that occurs during or resulting from an exam, commonly a contrast medium reaction.**
Contract	**A possible category of exam when imaging services are contracted out.**
Contrast medium	**A radio-opaque injectable or ingestible substance that appears on radiographic images and is helpful in image interpretation. It is used in many, imaging procedures.**
Contrast reaction message	**A warning message that will display when a patient who has had a previous contrast medium reaction is registered for a procedure that uses contrast media. The message text is entered during Rad/Nuc Med division parameter setup.**
Credit stop code	**See Stop Code. Also see MAS package documentation.**
Current Procedural Terminology (CPT)	**A set of codes published annually by the American Medical Association which include Radiology/Nuclear Medicine procedures. Each active detailed or series procedure must be assigned a valid, active CPT code to facilitate proper workload crediting. In DHCP, CPT's are represented by entries in the CPT file #81.**
Descendent	**A type of Rad/Nuc Med procedure. One of several associated with a 'Parent' type of procedure. The descendent procedures are actually registered and performed. Also see Parent.**
Desired date (of an order)	**The date the ordering party would like for the exam to be performed. Not an appointment date. The imaging service is at liberty to change the date depending on their availability.**
Detailed procedure	**A procedure that represents the exact exam performed, and is associated with a CPT code and an AMIS code.**

Diagnostic code	**Represented, for the purposes of this system, by entries in the Diagnostic Codes file (#78.3). Diagnostic codes describe the outcome of an exam, such as 'normal', 'abnormal'. A case may be given one or more (or no) diagnostic code(s).**
Discontinued	**An order status that occurs when a user cancels an order.**
Distribution queue	**A mechanism within the Radiology/Nuclear Medicine system that facilitates printing results reports at various hospital locations, such as the patient's current ward or clinic, the file room, and medical records.**
Division, Rad/Nuc Med	**A subset of the DHCP Institution file (#4). Multi-divisional sites are usually sites responsible for imaging at more than one facility.**
DRAFT	**A report status that is assigned to all Rad/Nuc Med results reports as soon as they are initially entered into the system, but before they are changed to a status of 'VERIFIED' or (if allowed) 'RELEASED/NOT VERIFIED'.**
Electronic signature code	**A security code that the user must enter to identify him/herself to the system. This is required before the user is allowed to electronically verify Rad/Nuc Med reports. This is not the same as the Access/Verify codes.**
Exam label	**One of 3 types of labels that can be printed at the time exam registration is done for a patient. Also see jacket label, flash card.**

Exam status	**The state of an exam that describes its level of progress. Valid exam statuses are represented in this system by entries in the Examination Status file (#72). Examples are ordered, CANCELLED, COMPLETE, WAITING FOR EXAM, CALLED FOR EXAM, and TRANSCRIBED. The valid set of exam statuses is, to a degree, site tailorable. There are many parameters controlling required data fields, status tracking and report contents that are determined when the parameters of this file are set up. There are separate and different set of statuses for requests and reports.**
Exam status parameter setup	**See Exam status.**
Exam status time	**The date/time when an exam's status changes, triggered by exam data entry that can be done through over a dozen different options.**
Film size	**Represented by entries in the Film Sizes file (#78.4) in this system. Used to facilitate film use/waste tracking.**
Flash card	**One of 3 labels that can be generated at the time an exam is registered for a patient. The flash card was named because it can be photographed along with an x-ray, and its image will appear on the finished x-ray. Helpful in marking x-ray images with the patient's name, SSN, etc. to insure that x-rays are not mixed up.**
Flash card formatter	**The name given to the option/mechanism that allows users to define formats for labels and for headers and footers on results reports. Users can specify which fields to print at various columns and lines on the label or report header/footer.**
Footer	**The last lines of the results report, the format of which can be specified using the Flash card formatter.**
Format	**The specification for print locations of fields on a printed page. In this system, print formats can be specified using the Flash card formatter.**

Header	**The top lines of the results report, the format of which can be specified using the Flash card formatter.**
Health Summary	**Refers to a report or DHCP software package that produces a report showing historical patient data. Can be configured to meet various requirements. Refer to the Health Summary documentation for more information.**
Hold	**An order status occurring when a users puts an order on HOLD, indicating that a study should not yet be done or scheduled, but that it will likely be needed in the future.**
Hospital location	**Represented in DHCP by entries in the Hospital Location file (#44). Rad/Nuc Med locations are a subset of the Hospital Location file.**
Imaging location	**One of a subset of Hospital Locations (See Hospital location) that is represented in the Imaging Location file #79.1, and is a location where imaging exams are performed.**
Imaging type	**For the Rad/Nuc Med software, the set of valid imaging types is:** **ANGIO/NEURO/INTERVENTIONAL** **GENERAL RADIOLOGY** **NUCLEAR MEDICINE** **ULTRASOUND** **VASCULAR LAB** **CARDIOLOGY STUDIES (NUC MED)** **CT SCAN** **MAGNETIC RESONANCE IMAGING** **These are the imaging types that are supported by this version of the software. Each imaging location and procedure may be associated with only one imaging type.**
Impression	**A short description or summary of a patient's exam results report. Usually mandatory data to complete an exam. The impression is not purged from older reports even though the lengthier report text is.**

Inactivate	**The process of making a record in a file inactive, usually by entering an inactive date on that record or deleting a field that is necessary to keep it active. When a record is inactive, it becomes essentially "invisible" to users. Procedures, common procedures, modifiers, and exam statuses can be inactivated.**
Inactivation date	**A date entered on a record to make it inactive. See Inactivate.**
Information Resources Management	**The service within VA hospitals that supports the installation, maintenance, troubleshooting, and sometimes local modification of DHCP software packages and the hardware that they run on.**
Interpreting physician (also Interpreting Resident, Interpreting Staff)	**The resident or staff physician who interprets exam images.**
IRM	**See Information Resources Management.**
Jacket label	**One of the 3 types of labels that can be generated at the time an exam is registered for a patient. Usually affixed to the x-ray film jacket. (See also exam label, flash card.)**
Key	**See security key.**
Label print fields	**Fields that are selectable for printing on a label, report header, or report footer on formats that are designed using the Flash card formatter. Also see Flash card formatter.**
Mode of transport	**The patient's method of moving within the hospital, (ambulatory, wheelchair, portable, stretcher) designated at the an exam is ordered.**
Modifier	**Additional information about the characteristics of an exam or procedure (such as bilateral, operating room, portable, left, right). Also see bilateral, operating room, portable.**

No purge indicator	**A flag that can be set on the exam record to force the purge process to bypass the record. Guarantees that the record will not be purged when a historic data purge is scheduled by IRM. Also see Purge.**
Non-credit stop code	**Certain stop codes, usually for health screening, that do not count toward workload credit. If a non-credit stop code is assigned to a procedure, another credit stop code must also be assigned. Also see Stop code.**
OE/RR	**See Order Entry/Results Reporting.**
On-line verification	**The option within the Radiology/Nuclear Medicine package that allows physicians to review, modify, and electronically sign patient result reports.**
Operating room	**A special type of procedure modifier, that, when assigned to an exam will cause the exam to be included in workload/AMIS reports under both the AMIS code of the procedure and under the AMIS code designated for Operating Room.**
Order	**The paper or electronic request for an imaging exam to be performed.**
Order Entry	**The process of requesting that one or more exams be performed for a patient. Order entry for Radiology/Nuclear Medicine procedures can be accomplished through a Rad/Nuc Med software option or through a separate DHCP package, Order Entry/Results Reporting (OE/RR).**
Order Entry/Results Reporting	**A DHCP package that performs that functions of ordering for many clinical packages, including Radiology/Nuclear Medicine.**
Outside films registry	**A mechanism in this system that allows users to track films done outside of the medical center. This can also be accomplished through the DHCP Records Tracking package. Refer to Records Tracking documentation for more information.**

Parent procedure	**A type of Rad/Nuc Med procedure that is used for ordering purposes. It must be associated with 'descendent' procedures that are of procedure type 'detailed' and/or 'series'. At the time of registration the descendent procedures are actually registered. Setting up a parent procedure provides a convenient way to order multiple related procedures on one order. Parent/descendent procedure relationships must be set up ahead of time during system definition and file tailoring by the ADPAC.**
Pending	**An order status that every Rad/Nuc Med order is placed in as soon as it is ordered through this system's ordering option. This system also receives orders from the DHCP OE/RR system and places them in a PENDING status.**
Portable	**A special type of procedure modifier, that, when assigned to an exam will cause the exam to be included in workload/AMIS reports under both the AMIS code of the procedure and under the AMIS code designated for Portable.**
Pre-verification	**The process whereby a resident reviews a report and affixes his/her electronic signature to indicate that the report is ready for staff (attending) review, facilitated through an option in this system for Resident Pre-verification.**
Primary Interpreting Staff/ Resident	**The attending or resident primarily responsible for the interpretation of the case. (See also Secondary Interpreting Staff/Resident.)**
Primary physician	**The Radiology/Nuclear Medicine software obtains this data from the MAS package, which is responsible for its entry and validity. Refer to the DHCP MAS package documentation for more information and a description of the meaning of this term as it applies to DHCP.**
Principal clinic	**For the purposes of the Radiology/Nuclear Medicine system, this term is usually synonymous with 'referring clinic'. However, for the purposes of stop code crediting, it is defined as the clinic/stop code that is associated with the imaging location where the exam was performed.**

PROBLEM DRAFT	**A report status that occurs when a physician identifies a results report as having unresolved problems, and designates the status to be 'PROBLEM DRAFT'. Depending on site parameters, a report may be designated as a PROBLEM DRAFT due to lack of an impression. Also see Problem statement.**
Problem statement	**When a results report is in the 'PROBLEM DRAFT' status, the physician or transcriptionist is required to enter a brief statement of the problem. This problem statement appears on report displays and printouts.**
Procedure	**For the purposes of this system, a medical procedure done with imaging technology for diagnostic purposes.**
Procedure message	**Represented in this system by entries in the Rad/Nuc Med Procedure Message file (#71.4). If one or more procedure messages are associated with a procedure, the text of the messages will be displayed when the procedures is ordered, registered, and printed on the request form. Useful in alerting ordering clinicians and imaging personnel of special precautions, procedures, or requirements of a given procedure.**
Procedure type	**A characteristic of a Rad/Nuc Med procedure that affects exam processing and workload crediting. See Detailed, Series, Broad, and Parent.**
PTF Bedsection	**See MAS documentation.**
Purge	**The process that is scheduled at some interval by IRM to purge historic computer data. In this system, purges are done on results report text, orders, activity logs, and clinical history.**
Registration (of an exam)	**The process of creating a computer record for one or more patient/procedure/visit date-time instances. Usually done when the patient arrives at the imaging service for an exam.**

RELEASED/NOT VERIFIED	**A results report status that may or may not be implemented at a given medical center. Reports in this status may be viewed by hospital staff outside of the imaging service.**
Report batch	**See Batch.**
Report status	**The state of a report that describes its progress level. Valid report statuses in this system are DRAFT, PROBLEM DRAFT, RELEASED/NOT VERIFIED (if the site allows this status), and VERIFIED. The status of a report may affect the status of an exam. Also see Exam status. Exams and requests each have a separate and different set of statuses.**
Request	**Synonymous with order. See Order.**
Request status	**The state of a request (order) that describes its progress level. Valid request statuses in this system are UNRELEASED(only if created through OE/RR), PENDING, HOLD, SCHEDULED, ACTIVE, DISCONTINUED, and COMPLETE. Reports and exams each have a separate and different set of statuses.**
Request urgency	**Data entered at the time an exam is ordered to describe the priority/criticality of completing the exam quickly (i.e. Stat, Urgent, Routine).**
Requesting location	**Usually the location where the patient was last seen or treated (an inpatient's ward, or an outpatient's clinic). All requesting locations are represented by an entry in the DHCP Hospital Location file (#44). The requesting location may be, but is usually not an imaging location.**
Requesting physician	**The physician who requested the exam.**
Research source	**A research project or institution that refers a patient for a Radiology/Nuclear Medicine exam.**
Scheduled	**An order status that occurs when imaging personnel enter a date when the exam is expected to be performed.**

Secondary Interpreting Staff/Resident	**This generally refers to an attending/resident who assisted or sat in on review of the case, but is not primarily responsible for it. It may also be used to indicate a second reviewer of the case, for quality control or peer review purposes.**
Security key	**Represented by an entry in the DHCP Security Key file. Radiology/Nuclear Medicine keys include RA MGR, RA ALLOC, and RA VERIFY. Various options and functionalities within options require that the user "own" a security key.**
Staff	**Imaging Attending.**
Staff review (of reports)	**The requirement where an attending imaging physician is required to review the reports written by a resident imaging physician.**
Standard report	**Represented in this system by entries in the Standard Reports file (#74.1). Standard reports can be created by the ADPAC during system definition and set-up. If the division setup specifies that they are allowed, transcriptionists will be offered a selection of standard report text and impressions to minimize data entry effort.**
Status tracking	**The mechanism within this system that facilitates exam tracking from initial state (usually WAITING FOR EXAM) to the COMPLETE state. ADPACs must specify during exam status parameter setup which statuses will be used, which data fields will be required to progress to each status, which data fields will be prompted, and exams of which statuses will be included on various management reports.**

Stop code	**Member of a coding system designed by VA Central Office to aid in determining workload and reimbursement of the medical centers. Stop codes are controlled by VA Central Office MAS. The set of valid stop codes is revised October 1 of each year. At this time the DHCP MAS package developers issue a maintenance patch to the DHCP software updating the file containing stop codes. Imaging stop codes are represented by entries in the Valid Imaging Stop Code file #71.5. Imaging stop codes are a subset of the DHCP Clinic Stop file #40.7. See MAS documentation for more information.**
Synonym	**In the Radiology/Nuclear Medicine package, synonyms are alternate terms that can be associated with procedures for the purposes of convenient look-up/retrieval. A given procedure may have more than one synonym, and a given synonym may be used for more than one procedure.**
Technologist	**Radiology/Nuclear Medicine personnel who usually are responsible for performing imaging exams and entering exam data into the system.**
Timeout	**The amount of time allowed before a user is automatically logged out of the system if no keystrokes are entered. This is a security feature, to help prevent unauthorized users from accessing your DHCP account in case you forget to log off the system or leave your terminal unattended.**
Transcribed	**An exam status that may occur when a results report is initially entered into the system for an exam. If this status is not activated at the site, it will not occur.**
Unreleased	**An order status that occurs when an exam order is created, but no authorization to carry out the order has been given. This is possible only if the order is created through the OE/RR software.**

Verification	**For the purposes of this system, the process of causing a results report to progress to the status of 'VERIFIED'. This happens when a physician affixes his/her electronic signature to the report, or when a transcriptionist, with the proper authorization, enters the name of a physician who has reviewed and approved a report. This is analogous to a physician signing a paper report.**
Verified	**A results report status that occurs at the time of verification. A report is verified when the interpreting physician electronically signs the report or gives his/her authorization that the report is complete and correct. Also see Verification.**
Waiting for exam	**An exam status that occurs as soon as the exam is first registered. The system automatically places all exams in this status upon registration.**
Ward	**The hospital location where an inpatient resides. In DHCP, wards are a subset of the Hospital Location file (#44).**
Weighted work unit	**The number that results from multiplying the weight of a procedure's AMIS code with the procedure's AMIS weight multiplier for that AMIS code. If a procedure has more than one AMIS code, the multiplication is done for each and the results are summed.**
Workload credit	**A general term that can refer to either the stop code or CPT type of workload credit that is used in the VA to calculate reimbursement to medical centers for work done, or the AMIS crediting used by the AMIS workload system.**

Appendix A

This appendix describes interfaces to the Radiology/Nuclear Medicine package based upon HL7 messaging standards. The HL7 messages form the basis for the exchange of health care information between the DHCP Radiology/Nuclear Medicine package and all non-DHCP systems, especially those non-DHCP systems that generate Radiology/Nuclear Medicine results information, specifically reports and impressions, or require data about Radiology/Nuclear Medicine exam registration, cancellation, and results reports.

The following HL7 messages are used to support the exchange of Radiology/ Nuclear Medicine data:

ACK	**General Acknowledgement**
ORF	**Observational Report Response**
ORM	**Order**
ORU	**Observational Results Unsolicited**
QRY	**Query Message**

The following HL7 segments are used to support the exchange of Radiology/ Nuclear Medicine data:

MSA	**Message Acknowledgement**
MSH	**Message Header**
OBR	**Observational Request**
OBX	**Result**
ORC	**Common Order**
PID	**Patient Identification**
QRD	**Query Definition**

The following HL7 fields may be used to support the exchange of Radiology/ Nuclear Medicine data for each of the segments listed above (Not all fields are used in all messages, see examples that follow):

Segment	Field Seq #	Field Element Name
MSA	**1**	**Acknowledgement Code**
	2	**Message Control ID**
	3	**Text Message**
MSH	**1**	**Field Separator**
	2	**Encoding Characters**
	3	**Sending Application**
	4	**Sending Facility**
	5	**Receiving Application**
	6	**Receiving Facility**
	7	**Date/Time of Message**
	8	**Security**

	9	Message Type
	10	Message Control ID
	11	Processing ID
	12	Version ID
OBR	3	Fillers Order # (Exam and Case IDs)
	4	Universal Service ID
	7	Observation Date/Time
	8	Observation End Date/Time
	9	Collection Volume
	14	Received Date/Time
	16	Ordering Provider
	18	Placers Field #1 (Ward/Clinic)
	20	Fillers Field #1 (Ward/Clinic)
	22	Results Rpt/Status Change Date Time
	25	Report Status
	27	Mode of Transportation
	32	Verifying Physician ID and Name
	33	Primary Staff or Resident Physician ID and Name
OBX	2	Value Type
	3	Observation Identifier
	5	Observation Results
ORC	1	Order Control
	5	Order Status
	9	Date/Time of Transaction
	12	Ordering Provider
PID	3	Patient ID and checksum
	5	Patient Name
	7	Date of Birth
	8	Sex
	19	Patient SSN
QRD	1	Query Date/Time
	2	Query Format Code
	3	Query Priority
	4	Query ID
	7	Quantity Limited Request
	8	Who Subject Filter
	9	What Subject Filter
	10	What Department Data Code
	11	What Data Code Value Qual.

The flow of transactions between the DHCP Radiology/Nuclear Medicine package and other applications may occur in one of two ways:

1) The Radiology/Nuclear Medicine package will send an HL7 message with exam information to a site-specified application, if one is defined, when that exam has been registered or cancelled, or when a report has been put in a status of Verified or Released/Not Verified. Appendix B describes how to direct these cancellation, registration and report results HL7 messages from the Radiology/Nuclear Medicine package to another application using a protocol.

When an exam is registered or cancelled by the Radiology/Nuclear Medicine package, an Order (ORM) message is sent to the site-specified application. The ORM message consists of the following segments:

MSH	**Message Header**
PID	**Patient Identification**
ORC	**Common Order**
OBR	**Observational Request**
OBX	**Result**

Example:

```
      MSH^~|\&^&RADPACS^578^PACS^PACS FACILITY^19950412150219^^ORM^88^P^2.1
      PID^^^6552~7~M11^^HAMMER,RHONDA^^19840515^F^^^^^^^^^^321448277
      ORC^NW^^^^IP^^^^19950412091135
      OBR^^^7049589.8964-1~041095-85~L^76091~MAMMOGRAM, BOTH BREASTS~CPT4~436
~MAMMOGRAM BILAT~99RAP^^^19950412091135^""^""^^^^^""^^4505~HILLER,CINDY^^1N^^
^^19950412091135^^^^^~~~~~R
      OBX^^CE^P~PROCEDURE~L^^436~MAMMOGRAM BILAT~L
      OBX^^TX^M~MODIFIERS~L^^LEFT, OBLIQUE
      OBX^^TX^H~HISTORY~L^^This is the clinical history for the patient's
exam.  This is going to be several
      OBX^^TX^H~HISTORY~L^^lines in length so we can see what happens when we
create the HL7 message.
      OBX^^TX^H~HISTORY~L^^
      OBX^^TX^H~HISTORY~L^^This is the first line of the second paragraph
      OBX^^TX^H~HISTORY~L^^This is the second line of this paragraph.
      OBX^^TX^A~ALLERGIES~L^^PENICILLIN(V), CATS(V), DOGS(V), TOMATO(V),
RAGWEED(V), RADIOLOGICAL/CONTRAST MEDIA(N), COCAINE(V)
```

Note: Differences to note between an HL7 message for registration and cancellation; 1) the Order Control value on the ORC segment is NW for registration and CA for cancellation, 2) the Order Status value on the ORC segment is IP for registration and CA for cancellation and 3) the Mode of Transportation value on the OBR segment (in the example above, ~~~~~R) is omitted from the cancellation message.

When a report is Verified or Released/Not Verified by the Radiology/Nuclear Medicine package, an Order (ORU) message is sent to the site-specified application. The ORU message consists of the following segments:

MSH	**Message Header**
PID	**Patient Identification**
OBR	**Observational Request**
OBX	**Result**

Example:

```
      MSH^~|\&^RADPACS^578^PACS^PACS FACILITY^199504121040^^ORU^170^P^2.1
      PID^^^374~3~M11^^LIME~HARRY^^19080817^M^^^^^^^^^^714262873
      OBR^^^7049587.8959-1~041295-334~L^76020~X-RAYS FOR BONE AGE~CPT4~423~
BONE AGE~99RAP^^^199504121040^""^""^^^^^19950412150219^^4507~TAYLOR,FRANK^^^^
X-RAY STOP^^199504121503^^^F^^^^^^^4505~HILLER~CINDY^4532~FLASHCARD~FERGUS
      OBX^^TX^I~IMPRESSION~L^^This is the first line of impression text on the
report record.
      OBX^^TX^I~IMPRESSION~L^^The second line of impression text on the report
record.
      OBX^^TX^I~IMPRESSION~L^^The third line of impression text on the report
record.
      OBX^^ST^D~DIAGNOSTIC CODE~L^^POSSIBLE MALIGNANCY, FOLLOW-UP NEEDED
      OBX^^TX^R~REPORT~L^^This is the first line of report text in the report
record.
      OBX^^TX^R~REPORT~L^^The second line of report text.
      OBX^^TX^R~REPORT~L^^The third line of report text.
      OBX^^CE^P~PROCEDURE~L^^423~BONE AGE~L
      OBX^^TX^M~MODIFIERS~L^^PORTABLE EXAM
```

The receiving application then sends a General Acknowledgement (ACK) message back to the Radiology/Nuclear Medicine package. The ACK message consists of the following segments:

MSH	**Message Header**
MSA	**Message Acknowledgement**

Example:

```
      MSH^~`&^PACS^PACS FACILITY^RADIOLOGY^578^199504121041^^ACK^170^P^2.1
      MSA^AA^170
```

2) Another application may query the Radiology/Nuclear Medicine package for an exam list either for a patient or for a specific exam. The Radiology/Nuclear Medicine application will respond with the appropriate exam information. The other application later sends the report results for a selected exam back to the Radiology/Nuclear Medicine package.

When an application sends a Query (QRY) message to the Radiology/Nuclear Medicine package it consists of following segments:

MSH	**Message Header**
QRD	**Query Definition**

The Security field (#8) of the MSH segment must contain the user's Access Code and Electronic Signature code. A query can be used to request a list of exams or just the most recent exam. To request the most recent exam, the Query Limited Request field (#7) of the QRD segment would specify one record as the quantity (1~RD). To receive a list of exams, more than one record would be specified as in the example below (10~RD). A query can be used to request a specific exam. To do so, the Quantity Limited Request field (#7) must specify one record (1~RD) and the Who Subject Filter field (#8) of the QRD segment must specify the exam number (e.g., 011995-219) and the What Department Data Code field (#10) of the QRD segment must specify the word EXAM.

Example:

```
      MSH^~`&^VOICERAD^VENDOR^RADIOLOGY^578^199506190652^ACCESS CODE~~
ELECTRONIC SIGNATURE^QRY^447^P^2.1
      QRD^199506190652^R^I^001^^^10~RD^682816440^OTH^PATIENT^S
```

The Radiology/Nuclear Medicine package responds to the query with a list of exams for a patient in an ORF message. The ORF message consists of the following segments:

MSH	**Message Header**
MSA	**Message Acknowledgement**
QRD	**Query Definition**
PID	**Patient Indentification**
OBR	**Observational Result**
OBX	**Result**

In the following example, only one complete exam existed for the patient. Since the response is designed to include only incomplete exams, for which no report is filed, this example contains no procedures.

Example:

```
      MSH^~|\&^RADIOLOGY^608^RADIOLOGY^NON-DHCP^199104301101^^ORF^54321^P^2.1
      MSA^AA^12347
      QRD^199104301101^R^I^Q1^^^1~RD^55555^OTH^PATIENT
      PID^^^55555~5~M11^^DOE~JOHN~J^^19300101^M^^^^^^^^^^987654321
      OBR^^^^7089898.8453-1~043091-66~L^^^199104301200^""^""^^^^^""^^3232~
HARRIS~JACK^^^^MEDICINE^^199104301200
      OBX^^TX^H~HISTORY~L^^A history is not available for this patient.
      OBX^^TX^P~PROCEDURE~L^^CHEST 1 VIEW
      OBX^^TX^M~MODIFIERS~L^^RIGHT, PORTABLE
      OBX^^TX^A~ALLERGIES~L^^BEE STINGS
```

In the following example, several complete exams existed for the patient.

Example:

```
MSH^~`&^RADIOLOGY^578^VOICERAD^VENDOR^19950619120423^^ORF^2950619
.120423^P^2.1
MSA^AA^447
QRD^199506190652^R^I^001^^^4~RD^682816440^OTH^PATIENT^S
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^682816440
OBR^^^^7049880.8549-1~011995-219~L^^^199501191450^""^""^^^^^""^^4507~TAY
LOR~FRANK^^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^ANKLE 2 VIEWS
OBX^^TX^M~MODIFIERS~L^^RIGHT
OBX^^TX^H~HISTORY~L^^Twisted ankle playing football.
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^682816440
OBR^^^^7049880.8549-2~011995-220~L^^^199501191450^""^""^^^^^""^^4507~TAY
LOR~FRANK^^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^FOOT 2 VIEWS
OBX^^TX^M~MODIFIERS~L^^RIGHT
OBX^^TX^H~HISTORY~L^^Foot is swollen.
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^682816440
OBR^^^^7049880.8549-3~011995-221~L^^^199501191450^""^""^^^^^""^^4507~TAY
LOR~FRANK^^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^NON-INVAS.,LOW EXT. VEIN W/O US
OBX^^TX^M~MODIFIERS~L^^LEFT
OBX^^TX^H~HISTORY~L^^High blood pressure, moderate smoker (cigars).
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^682816440
OBR^^^^7049880.8549-4~011995-223~L^^^199501191450^""^""^^^^^""^^4507~TAY
LOR~FRANK^^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^TOE(S) 2 OR MORE VIEWS
OBX^^TX^M~MODIFIERS~L^^RIGHT
OBX^^TX^H~HISTORY~L^^Toes are swollen and discolored.
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^682816440
OBR^^^^7049880.8551-1~011995-216~L^^^199501191448^""^""^^^^^""^^4507~TAY
LOR~FRANK^^^^X-RAY STOP^^199501191448
OBX^^CE^P~PROCEDURE~L^^FOREARM 2 VIEWS
OBX^^TX^M~MODIFIERS~L^^RIGHT
OBX^^TX^H~HISTORY~L^^High blood pressure, moderate smoker (cigars).
```

When the corresponding report results are ready, an Observational Results Unsolicited (ORU) message is sent to the Radiology/Nuclear Medicine package, The ORU message consists of the following segments:

MSH	**Message Header**
PID	**Patient Identification**
OBR	**Observational Request**
OBX	**Result**

Example:

```
      MSH^~|\&^VOICERAD^VENDOR^RADIOLOGY^578^199104301010^ACCESS CODE~ VERIFY
CODE~SIGNATURE CODE^ORU^12346^P^2.1
      PID^^^100~10~M11^^JONES~JOHN~J^^19421112^M^^^^^^^^^^123456789
      OBR^^^7089898.8543-1~043091-66~L^^^^199104301200^""^""^^^^^""^^3232~
HARRIS~JACK^^^^MEDICINE^^199104301010
      OBX^^TX^I~IMPRESSION~L^^HEART NORMAL SIZE
      OBX^^ST^D~DIAGNOSTIC CODE~L^^NORMAL
      OBX^^TX^R~REPORT~L^Heart appears to be of normal size.
      OBX^^TX^R~REPORT~L^^No infiltrate or abnormal mass noted.
```

Note: The Diagnostic Code sent to DHCP must be one of a pre-defined set in the Radiology/Nuclear Medicine Diagnostic Codes file (#78.3).

The Radiology/Nuclear Medicine package sends back a General Acknowledgment (ACK) message.

Appendix B

Four new protocols exist to send exam or report data from the Radiology/Nuclear Medicine package to another application such as a commercial imaging system via the HL7 package.

Three of the protocols are triggered when a particular event occurs. When an exam is registered, the RA REG protocol is invoked. When an exam is cancelled, the RA CANCEL protocol is invoked. When a report is placed in a status of Verified or Released/Not Verified, the RA RPT protocol is invoked. These are extended action protocols. The Entry Action for each of these protocols collects the necessary information to create an HL7 message. The Item field value for each of these three protocols is the RA SEND protocol.

The RA SEND protocol identifies the application you want the HL7 message to go to. This is an action type protocol which will call the HL7 package to deliver an HL7 message from the Radiology/Nuclear Medicine package to another application. However, the entry action must be edited by the site if they actually wish to set up the HL7 package parameters to communicate with another application. Initially, the entry action looks like this:

```
Q  S HLNDAP="xxxx" D INIT^HLTRANS,EN^HLTRANS
```

After editing it should look like this:

```
S HLNDAP="name of application" D INIT^HLTRANS,EN^HLTRANS
```

The 'Q'uit is removed and the "xxxx" placeholder is replaced with the name of the application that the Radiology/Nuclear Medicine package will communicate with.

The name should be identical to the name of the application set up in the DHCP HL7 package. See the HL7 package documentation for information about setting up the file entries needed to define the application to DHCP. Set-up for Radiology/Nuclear Medicine messaging in the HL7 package is subject to change as the HL7 package evolves.

Example:

```
D Q^DI


VA FileMan 21.0


Select OPTION: 1  ENTER OR EDIT FILE ENTRIES



INPUT TO WHAT FILE: PROTOCOL// <RET>
EDIT WHICH FIELD: ALL// ENTRY ACTION
THEN EDIT FIELD: <RET>


Select PROTOCOL NAME: RA SEND          Rad/Nuc Med sends to another
application

ENTRY ACTION: Q  S HLNDAP="xxxx" D INIT^HLTRANS,EN^HLTRANS
           Replace Q  S With S  Replace xxxx With PACS GATEWAY
  Replace <RET>
   S HLNDAP="PACS GATEWAY"  D INIT^HLTRANS,EN^HLTRANS


Select PROTOCOL NAME:
```